

ADEC Site Visit Report



Tuluksak Old Power Plant Hazard ID 25309 File No. 2451.57.001



Tuluksak Old BIA School Hazard ID 25428 File No. 2451.57.002

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Introduction

In August 2019, ADEC Staff Erin Gleason and Lisa Griswold traveled to Tuluksak, AK to take samples at the Old Power Plant, the Old BIA School, the Tuluksak River, and some drums located along the river. This report covers activities within the village of Tuluksak including the samples taken at the Old BIA School and Old Power Plant funded through STRP funding. Site visit information for the remaining tasks: Tuluksak River, and drum sampling funded through site discovery are provided under a separate cover.

Community Description

Tuluksak is located 35 miles north of Bethel and approximately 350 miles west of Anchorage. Tuluksak lies near the mouth of the Tuluksak River, which is the tributary of the Kuskokwim River. The village name Tuluksak was first published in 1861 as Tul'yagmyut, meaning “related to loon”. A city government was present from 1970 to 1997, and is currently still dissolved. Its climate is considered “Western transitional climate zone” with tundra with boreal forests, long cold winters, and shorter warm summers. The Federally Recognized Tribe is the Tuluksak Native Community (TNC), while the Village Corporation is Tulkisarmute Incorporated.

Site Background

Tuluksak Old BIA School

The Old BIA school was originally built in the early 1930's and there is a suspected underground storage tank still present on site. The site and building is located near the river banks that are eroding at a fast rate and the community is concerned about the future exposure of hazardous materials to the river.

Tuluksak Old Power Plant

The former power plant was replaced by a new power plant in 2003. The former power plant not only has extensive diesel contamination in the soil surrounding and beneath the power plant but there is concern regarding the contamination from releases related to the 25,000-gallon undiked fuel storage tank located at the facility.

According to residents in the area, residential construction in the vicinity of the former power plant was stopped because of the contamination associated with the former power plant. This site is located approximately 128 feet from the Tuluksak River. There is one groundwater well located near the washeteria that provides the majority of the drinking water for the community. Because there is limited storage capacity for water in the village, the community water supply is unable to keep up with demand. As a result, many people in the community also use surface water as a drinking water source.

Previous Investigations

Tuluksak Old BIA School

The Tuluksak Native Community submitted a DEC Brownfield Assessment Application in 2009 for the Old BIA School property which was burned down. The property currently contains an Old BIA Power Plant which has a building with petroleum and other hazardous substances as potential contaminants.

Tuluksak Old Power Plant

A 2010 Property Assessment and Cleanup Report documented several issues at the site, including solid waste but no samples were taken as part of the field effort.

Site Visit

On Monday August 19, ADEC staff visited the Tuliksarmute Inc. office to meet Joe DeMantle and provide him with a copy of the work plan and to obtain access agreements. Once the access agreements were signed, ADEC staff met the staff at the TNC office, and agreed to come back the next day to meet with other members.

On Tuesday August 20, ADEC staff conducted outreach in the community by first visiting one of the school science classes to show the students what staff were doing in the community and what instruments are used by scientific staff. Staff then went on to the TNC office to meeting with multiple staff members to discuss the proposed work in Tuluksak and offered more information on other items such as the DEC Brownfield Assessment and Cleanup service, and the BUILD Act.

Staff then went on to the old school, and noted transformers across from the new school (see photos 1 and 2). The transformers found did not have any markings indicating that they were PCB free. Staff then went around to visit the sewage lagoon behind the school. Tuluksak IGAP indicated that the school was supposed to be connected to a new lagoon in 2015, but the funding fell through.

Staff then traveled to the Old BIA School to conduct screening. Due to complications with traveling with isobutylene gas, the photoionization detector was calibrated prior to going out into the field. All samples were screened by placing soil into a polyethylene bag, labeled with a unique identifier and left to warm up. Once warmed up, the PID readings were collected by agitating the bag and sticking the end of the PID into the bag. All samples were collected in decreasing order of volatility, and collected in conjunction with collecting soil for field screening. Staff noted a depressed area, but no distressed vegetation or staining next to the building. The building on site measured 16 ft 2 in by 12 ft 1 ½ inches (see photo 3). IGAP staff indicated that it is rumored that there is a tank underneath the building, approximately 3 feet bgs (see photo 4). The foundation boards of the building were stained (see photo 4). A concrete slab with a wood cover was located between the building and the river as noted on Figure 1, possibly indicating the location of a possible UST (see photo 6). A cracked battery was also located next to the concrete pad (See figures 3 and 4).

The first area evaluated (TS-01-SO) was an outfall area that supposedly ran from the BIA school property and emptied from the bluff overlooking the Tuluksak River. The opening was approximately 14" tall, and 2 ft 6 inches wide. Staff then moved on to collecting field screening samples from around the building on the BIA property and the concrete slab. Samples TS-02-SO –

TS-05-SO were collected from different sides of the building, while TS-06-SO – TS-07-SO were collected from around the concrete slab (see figure 2). PID readings did not exceed 0.0 ppm as indicated in the below table. Following collection for PID reading, each location was then also screened using the XRF utilizing a 5 second hold in situ. No results indicated elevated levels of lead.

Sample ID	Depth	PID reading
TS-01-SO	0.0	0.0
TS-02-SO	0.0	0.0
TS-03-SO	0.0	0.0
TS-04-SO	0.0	0.0
TS-05-SO	0.0	0.0
TS-06-SO	0.0	0.0
TS-07-SO	0.0	0.0

Staff then moved on to evaluating the Old Power Plant. A transformer with no PCB label, a refrigerator and an empty 55 drum were located off to the side of the road in the vicinity of the “South Dumping Area”. Within the South Dumping Area (see figure 2), more drums were located to include two leaking drums, along with stained soil and dead vegetation. Several labels were found to include “Chevron Dell Motor Oil” and “Unitech”. The Power Plant building itself is elevated on pilings, smelled of fuel, and is considered too unsafe to enter. The soil underneath the power plant is without any vegetation and had stained soil, both beneath it and radiating outward. Empty propane bottles and wire insulators were found next to the power plant, along with various vehicle parts (see figure 2).

Staff then moved on to locating the Aboveground Storage Tank to the power plant. A liner is present underneath the tank, however the tank sits directly on the liner; the liner does not have dikes; and was full of water at the time of this field work. The tank was labeled with “#2 Diesel” and was no longer connected to the fuel line. Staff then located the fuel header between the power plant building and the Tuluksak River. The header container was also full of water.

On August 21, staff collected a water sample from the boat launch area presumably downgradient from the Old BIA School as part of a larger effort to sample different areas of the Tuluksak river. Samples were collected in decreasing order of volatility, taking care to transfer the water for the volatile collection with minimal aeration.

On August 22, staff returned the Power Plant site to collect samples for screening and laboratory analysis. Samples collected from the Old Power Plant were the same as the Old BIA School samples: All samples were screened by placing soil into a polyethylene bag, labeled with a unique identifier and left to warm up. Once warmed up, the PID readings were collected by agitating the bag and sticking the end of the PID into the bag. All samples were collected in decreasing order of volatility, and collected in conjunction with collecting soil for field screening.

Staff started out at the AST collecting TP-01-SO. It was noted that this area had a diesel odor. Staff then moved on to the South Dumping Area and located multiple items including drums with one marked “Jet A”, and two drums with a “Chevron DELO motor oil SAE 40” label. Here, TP-02-SO

and TP-03-SO. Staff then moved on to the North Debris Area where one drum with fluid was located. TP-04-SO was collected under this drum. Two spools of wire, one bare and one coated were found along with labels such as “464 Power Cable”, “type 11SS”, “kaphene aluminum”. Copper wire and black cables were located with the label “363-0021 Return 004-PJ”. Staff collected TP-05-SO in the vicinity of the fuel header and then moved on to evaluating the Power Plant Building itself. TP-06-SO, and its duplicate TP-08-SO were taken from the southern edge of the building. It was noticed at this location, that there is oil dripping off of the building at this area. TP-07-SO was collected from the east edge of the building. The highest PID readings were collected from in front of the AST (TP-01-SO; 400.2 ppm) and from TP-07-SO (205.2 ppm). Other PID readings can be seen in the below table. The XRF was also utilized at each of these locations in situ and did not locate any elevated concentrations of lead (see figures 5 and 6).

Sample ID	Depth	PID reading (ppm)
TP-01-SO	0.0	400.2
TP-02-SO	0.0	1.2
TP-03-SO	0.0	0.5
TP-04-SO	0.0	0.1
TP-05-SO	0.0	0.1
TP-06-SO	0.0	6.5
TP-07-SO	0.0	205.2

Results

Tuluksak Old BIA School

Sample results from the Old BIA School indicate that Diesel Range Organics (DRO) is present up to 1,600 mg/kg; Naphthalene up to 0.049 mg/kg; Pentachlorophenol up to 0.13 mg/kg; 1,2,4 – trimethylbenzene up to 6.2 mg/kg; 1,3,5 – trimethylbenzene up to 1.5 mg/kg; and vinyl chloride at 0.0074 mg/kg; all above the most stringent ADEC cleanup levels. Water samples contained detectable levels of arsenic, barium, chromium, and lead. However all were below ADEC Water Quality Standards. Benzo(a)anthracene was also detected, but below ADEC cleanup levels (See Appendix F).

	ADEC Cleanup level mg/kg	TS-01-SO mg/kg	TS-02-SO mg/kg	TP-03-SO mg/kg	TP-04-SO mg/kg	TP-05-SO mg/kg
DRO	250	12	180	47	46	1600
Naphthalene	0.038	0.003	0.021	0.0025	0.002	0.049
Pentachlorophenol	0.0043	ND	0.11	ND	0.13	ND
1,2,4 - trimethylbenzene	0.61	6.2	0.66	0.39	0.21	0.27
1,3,5 - trimethylbenzene	0.66	1.5	0.19	0.12	0.065	0.086
Vinyl Chloride	0.0008	ND	ND	ND	ND	0.0074

BOLD

Exceed ADEC most stringent clean up level

Tuluksak Old Power Plant

Sample results from the Old Power Plant indicate Diesel Range Organics (DRO) is present up to 14,000 mg/kg; Residual Range Organics (RRO) up to 38,000 mg/kg; Hexachlorobenzene up to 0.99 mg/kg; Pentachlorophenol up to 13 mg/kg; 2,6 dinitrotoluene up to 1.2 mg/kg; and nitrobenzene at 0.12 mg/kg all above the most stringent ADEC cleanup levels.

	ADEC Cleanup Level	TP-01-SO	TP02-SO	TP-06-SO	TP-07-SO	TP-08-SO
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DRO	250	14000	6200	9400	9100	5800
RRO	11,000	270	38000	33000	9300	21000
Hexachlorobenzene	0.0082	ND	ND	0.52	0.99	0.48
Pentachlorophenol	0.0043	ND	ND	3	4	13
2,6 - dinitrotoluene	0.005	ND	ND	1.2	ND	0.86
Nitrobenzene	0.0079	ND	ND	ND	ND	0.12

BOLD

Exceed ADEC most stringent clean up level

Updated Conceptual Site Model

Tuluksak Old BIA School

Contaminants were present in surface soil (0-2ft bgs) above most stringent ADEC cleanup levels. As the contamination was detected in surface soil, there is potential for it to migrate into the subsurface soil, groundwater, air, surface water and biota, making all of those pathways either complete, or potentially complete. The current and future receptors for all of these pathways include: Site visitors, trespassers or recreational users; farmers or subsistence harvesters; and subsistence consumers. The site is remote, currently abandoned and is unlikely to cause exposure to residents, commercial or industrial workers, or construction works.

Soil

Levels of Naphthalene, Pentachlorophenol, 1,2,4 – trimethylbenzene, 1,3,5 - trimethylbenzene and vinyl chloride were present, but at levels exceeding most stringent but below human health cleanup levels.

Groundwater

Groundwater was not sampled as part of this effort. However, due to multiple contaminants being detected above migration to groundwater cleanup levels in soil, there is potential for this pathway to be complete, but risk is unknown.

Air

Naphthalene, 1,2,4 – trimethylbenzene, 1,3,5 – trimethylbenzene and vinyl chloride are present in surface soil and are volatile. However the concentrations due not exceed human health criteria.

Surface Water

Surface water was sampled for Benzene, Ethylbenzene, Toluene and Xylenes (BTEX) and total metals only. None of these contaminants were detected above Alaska Water Quality Standards.

Biota

As the site is remote, abandoned and surrounded by woods, there is a higher potential for subsistence users to be exposed. However, at this time, no bioaccumulative compounds were detected above most stringent ADEC cleanup levels.

Tuluksak Old Power Plant

Contaminants were present in surface soil (0-2ft bgs) above most stringent, or in the case of DRO and RRO, above ingestion or inhalation cleanup levels. As the contamination was detected in surface soil, there is potential for it to migrate into the subsurface soil, groundwater, air, surface water and biota, making all of those pathways either complete, or potentially complete. The current and future receptors for all of these pathways include: Site visitors, trespassers or recreational users; farmers or subsistence harvesters; and subsistence consumers. The site is remote, currently abandoned and is unlikely to cause exposure to residents, commercial or industrial workers, or construction works.

Soil

Levels of DRO and RRO exceed the ingestion and inhalation cleanup levels, making them a potential contaminant for through incidental soil ingestion and inhalation of fugitive dust. Hexachlorobenzene, Pentachlorophenol, 2,6 dinitrotoluene, and Nitrobenzene were also present, but at levels not exceeding human health cleanup levels.

Groundwater

Groundwater was not sampled as part of this effort, and due to multiple contaminants were detected above migration to groundwater cleanup levels, there is potential for this pathway to be complete, but risk is unknown.

Air

Hexachlorobenzene and Nitrobenzene are present in surface soil and are volatile. However the concentrations due not exceed human health criteria.

Surface Water

Surface water was not sampled as part of this effort. However, as contaminants were detected in soil above migration to groundwater cleanup levels, and groundwater could impact surface water, this pathway could be considered complete.

Biota

Hexachlorobenzene is present above migration to groundwater in surface soil, and has the potential to bioaccumulate. Additionally as the site is remote, abandoned and surrounded by woods, there is a higher potential for subsistence users to be exposed.

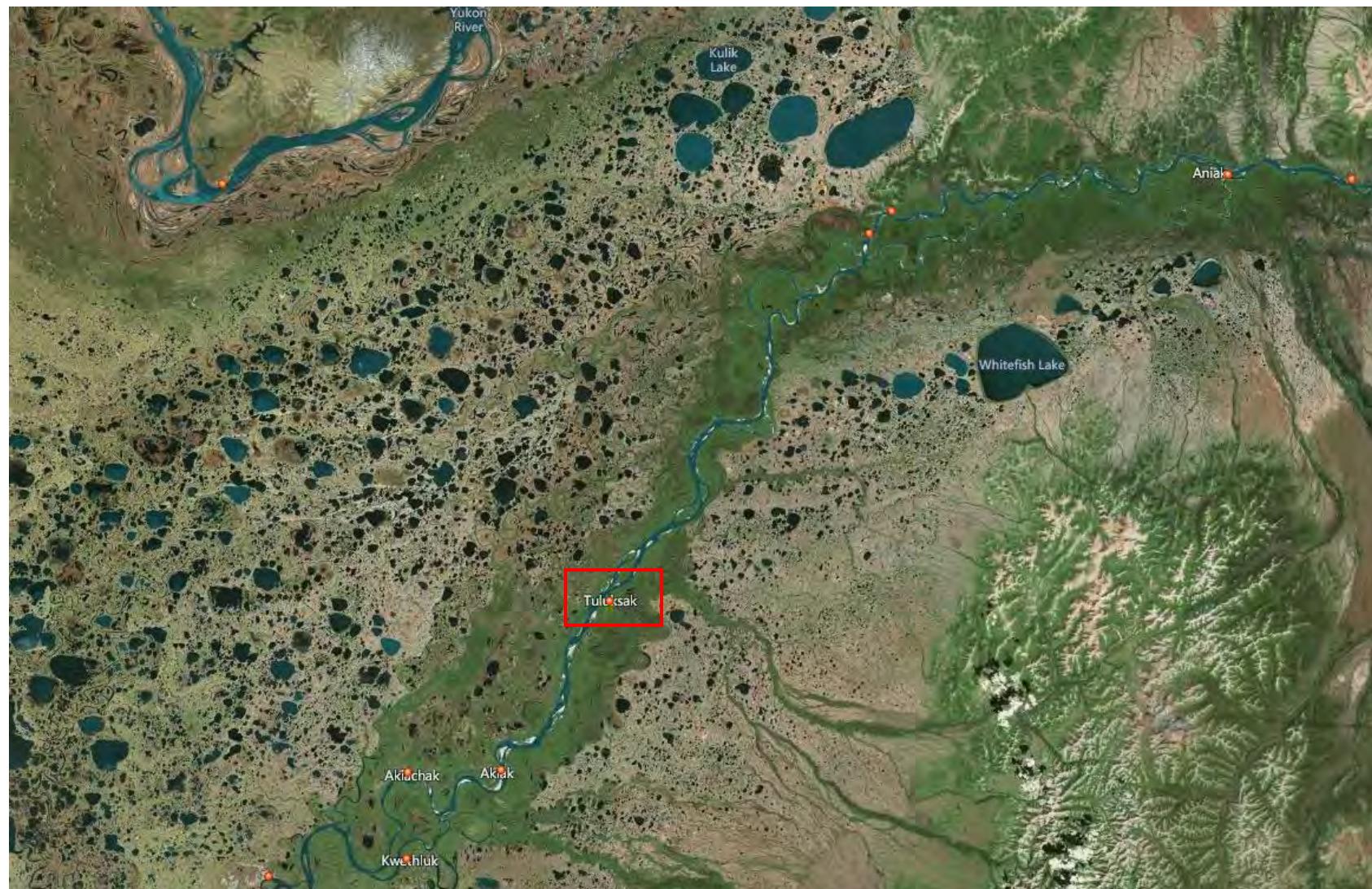
Field QA/QC

As noted in the screening section, the PID was not calibrated in the field. Field notebooks were kept to describe all activities. The log books described the following items

- Date
- Weather
- Site conditions
- Sampling team members
- Site sketches
- Field observations
- Location, unique ID and results of field screening

Please see Appendix H for copies of the log books

Appendix A: Community location



Appendix B: Site locations



Appendix C: Previous investigative figures



Figure from 2010 Property Assessment and Cleanup Plan



Figure from 2010 Property Assessment and Cleanup Plan

Appendix D: 2019 Site Visit Figures





Appendix E: Sampling Locations and results









Appendix F: Tables

Tuluksak Old BlA School

Table 1. DRO, RRO, PAH, EDB, DCA

	ADEC Cleanup Level ¹	TS-01-SO	TS-02-SO	TS-03-SO	TS-04-SO	TS-05-SO	TS-07-SO
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DRO	250	12Y	180	47Y	46Y	1600	250
RRO	10000	99Y	1000	350Y	360Y	5800	210
Acenaphthene	37	ND	ND	ND	ND	ND	ND
Acenaphthylene	18	ND	0.0076J	ND	ND	ND	ND
Anthracene	390	ND	0.018J	ND	0.0089J	ND	ND
Benzo (a) anthracene	0.70	ND	0.093J	ND	ND	ND	ND
Benzo (a) pyrene	1.50	ND	ND	ND	ND	ND	ND
Benzo (b) fluoranthene	15	ND	0.023J	ND	ND	ND	ND
Benzo (g,h,i) perylene	2300	ND	ND	ND	ND	ND	ND
Benzo (k) fluoranthene	150	ND	ND	ND	ND	ND	ND
Benzoic acid	200	ND	0.970J	1.1J	1.10J	ND	0.940J
Bis(2-ethylhexyl) phthalate	88	ND	0.160J	ND	0.120J	ND	0.520J
Di-n-butyl-phthalate	16	ND	ND	0.082J	ND	ND	ND
Butyl benzyl phthalate ^B	16	0.066JB	0.110JB	ND	0.100JB	ND	0.400B
Chrysene	600	ND	0.032J	ND	ND	ND	ND
Dibenz (a,h) anthracene	1.5	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	0.0050	ND	ND	ND	ND	ND	ND
Fluoranthene	590	ND	0.044	ND	0.014J	ND	.013J
Fluorene	36	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.0082	ND	ND	ND	ND	ND	ND
Indeno (1,2,3-cd) pyrene	15.0	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	0.41	ND	0.0072J	ND	ND	0.094J	ND
2-Methylnaphthalene	1.3	ND	0.013J	ND	ND	0.150J	ND
Naphthalene	0.038	0.003JB	0.021B	0.0025JHC	0.002JHC	0.049HBC	0.011HBC
Nitrobenzene	0.0079	ND	ND	ND	ND	ND	ND
N-Nitroso-di-n-propylamine	0.00068	ND ^C					
Pentachlorophenol	0.0043	ND	0.110J	ND	0.130J	ND	ND
Phenanthrene	39	ND	0.014J	ND	ND	ND	ND
Pyrene	87	ND	0.029	ND	0.011J	ND	0.0081J
1,2,3-Trichloroproppane	3.1x 10 ⁻⁵	ND	ND	ND	ND	ND	ND

BOLD	Exceed ADEC most stringent clean up level
1	18AAC75.341 most stringent cleanup level, under 40 inch, table B1 and table B2
J	Result is less than the reporting limit but greater than or equal to the mean detection limit and the concentration is considered an approximate value.
E	Method detection limit is greater than the most stringent ADEC cleanup level (18AAC75.341, table B2)
H	Most stringent cleanup level is a human health based level and not migration to groundwater.
C	Sample was prepared or analyzed outside of specified hold time.
B	Continuing calibration verification (CCV) analyzed was outside criteria and the results are considered an estimate
Y	Compound was found in the blank for all samples associated with the school
	Detected hydrocarbons appear to be due to oil and biogenic interference

Table 2. Metal, mercury, PCBs

	ADEC Cleanup Level ¹	TS-01-SO	TS-02-SO	TS-03-SO	TS-04-SO	TS-05-SO	TS-07-SO
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	0.2	16B	12	20	16	12	11
Barium	2100	150	180	190	220	290	140
Cadmium	9.1	0.25	1.1	0.76	0.47	1.9	0.37
Chromium	1.0 x 10 ⁵	40B	24	27	27	28	22
Lead	400	13	110B	28B	78B	210B	50B
Selenium	6.9	0.86B	1.2	1.7	1.5	1.6	1.1
Silver	11	0.14	0.22	0.2	0.2	0.21	0.13
Mercury	0.36	0.065	0.11	0.11	0.12	0.18	0.15
PCB (1254)	1.0	x	0.017	0.013J	0.0038J	0.025J	x

BOLD
1
x
B

Exceed ADEC most stringent clean up level
 18AAC75.341 most stringent cleanup level, under 40 inch, table B1
 Sample was not analyzed for this compound
 Compound was found in the blank

**Table 3. VOCs, EDB
(method 8011)**

	ADEC Cleanup Level ¹	TS-01-SO	TS-02-SO	TS-03-SO ^H	TS-04-SO ^H	TS-05-SO ^H	TS-07-SO ^H
	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
benzene	22	ND ^C	ND ^C	ND	ND	1.1JH	ND
1,2,4- trimethylbenzene	610	6200	660	390	210	270	100
1,3,5-trimethylbenzene	660	1500	190	120	65	86	31J
1,2-dibromoethane (ethylenedibromide)*	0.24	ND	ND	ND	ND	ND	ND
1,1,-Dichloroethene	1200	ND	ND	ND	ND	1.7JH	ND
1,2-dichloroethane (DCA)*	5.5	ND	ND	ND	ND	ND	ND
ethylbenzene	130	96	20J	17J	ND	34J	ND
Isopropylbenzene(cumene)	5600	130	18J	ND	ND	ND	ND
methyl-t-butyl ether (MTBE)	400	ND	ND	ND	ND	ND	ND
Xylenes (P&M)		830	130J	110J	74J	190J	46J
o-xylenes		430	56J	40J	28J	77J	19J
Xylenes (total)	15000	1260	186	150	102	267	65
toluene	6700	ND	ND	ND	ND	47J	ND
n-butylbenzene	23000	9300E	ND	ND	ND	210J	72J
sec-butylbenzene	42000	ND	48J	31J	ND	ND	ND
ter-butylbenzene	11000	ND	ND	ND	ND	ND	ND
naphthalene	38	ND	ND	ND	ND	ND	ND
hexachlorobutadiene	20	ND	ND	ND	ND	ND	ND
n-propylbenzene	9100	310	44J	31J	20J	32J	11J
1,2-dibromoethane (ethylenedibromide=EDB)*	0.24	ND	ND ^{MI}	ND ^{MI}	ND ^{MI}	ND ^{MI}	ND ^{MI}
1,2-dichloroethane (DCA)*	5.5	ND	ND ^{MI}	ND ^{MI}	ND ^{MI}	ND ^{MI}	ND ^{MI}
Vinyl Chloride	0.8	ND	ND	ND	ND	7.4JH	ND

BOLD	Exceed ADEC most stringent clean up level
1	18AAC75.341 most stringent cleanup level, under 40 inch, table B1 and table B2
J	Result is less than the reporting limit but greater than or equal to the mean detection limit and the concentration is considered an approximate value.
E	Method detection limit is greater than the most stringent ADEC cleanup level (18AAC75.341, table B2)
MI	Matrix interference is present in sample. Value may be biased.
H	Sample was prepared or analyzed outside of specified hold time.
*	EDB and DCA were analyzed as part of EPA method 8011. They are also included in the regular VOC suite of EPA method 8260, which is why they are included in this table twice.
C	Continuing calibration verification (CCV) analyzed was outside criteria and the results are considered an estimate

Table 4. BTEX, PAH

	Water Quality Criteria ²	TS-08-W	TS-09-W
	ug/L	ug/L	ug/L
Benzene	5	ND	ND
Toluene	1,000	ND	ND
Ethylbenzene	700	ND	ND
Xylenes (total)	10,000	ND	ND
Benzo(a)anthracene	NA	0.0096JB	0.010JB
TAH	10	ND	ND
TAqH	15	0.0096JB	0.010JB

J	Result is less than the reporting limit but greater than or equal to the mean detection limit and the concentration is considered an approximate value.
B	Compound was found in the blank
2	18 AAC 70 drinking water criteria

Table 5. Total metals concentration at Tuluksak School

	Water Quality Criteria ²	Most stringent hardness dependent criteria *	TS-16-W (total Metals)
	ug/L		ug/L
Arsenic	10	10 ^b	8.2B
Barium	2,000	2,000	27
Cadmium	5	0.15 ^c	ND
Chromium (total)	100	100 ^b	2
Lead	-	1.10 ^c	0.37J
Selenium	50	50	ND
Silver	-	0.94 ^d	ND
Mercury	2	0.05 ^e	ND

J	Result is less than the reporting limit but greater than or equal to the mean detection limit and the concentration is considered an approximate value.
B	Compound was found in the blank
2	18 AAC 70 drinking water criteria (for all compounds drinking water is the most stringent criteria listed)
b	drinking water criteria
C	aquatic life freshwater, chronic
D	aquatic life freshwater, acute
E	water + aquatic organisms
	not hardness dependent
	Metal is hardness dependent

*Tuluksak Old Power Plant***Table 1. DRO, RRO, PAH, EDB, DCA**

	ADEC Cleanup Level ¹	TP-01-SO	TP-02-SO	TP-03-SO	TP-04-SO	TP-05-SO	TP-06-SO	TP-07-SO	TP-08-SO
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DRO	250	14000	6200	39Y	14Y	14Y	9400	9100	5800
RRO	10000	270	38000	370Y	110Y	110Y	33000	9300	21000
Acenaphthene	37	ND	ND	ND	ND	ND	ND	ND	ND
Acenaphthylene	18	ND	ND	ND	ND	ND	ND	ND	ND
Anthracene	390	ND	ND	ND	ND	ND	ND	ND	ND
Benzo (a) anthracene	0.70	ND	ND	ND	ND	ND	ND	ND	ND
Benzo (a) pyrene	1.50	ND	ND	ND	ND	ND	ND	ND	ND
Benzo (b) fluoranthene	15	ND	ND	ND	ND	ND	ND	ND	ND
Benzo (g,h,i) perylene	2300	ND	ND	ND	ND	ND	ND	ND	ND
Benzo (k) fluoranthene	150	ND	ND	ND	ND	ND	ND	ND	ND
Chrysene	600	ND	ND	ND	ND	ND	ND	ND	ND
Dibenz (a,h) anthracene	1.5	ND	ND	ND	ND	ND	ND	ND	ND
2,6-Dinitrotoluene	0.0050	ND	ND	ND	ND	ND	1.2^{MI}	ND	0.86^{MI}
Fluoranthene	590	ND	ND	ND	0.0075	ND	ND	ND	ND
Fluorene	36	ND	ND	ND	ND	ND	ND	ND	ND
Hexachlorobenzene	0.0082	ND	ND	ND	ND	ND	0.52^{MI}	0.99^{MI}	0.48^{MI}
Indeno (1,2,3-cd) pyrene	15.0	ND	ND	ND	ND	ND	ND	ND	ND
1-Methylnaphthalene	0.41	ND	ND	ND	ND	ND	ND	ND	ND
2-Methylnaphthalene	1.3	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	0.038	ND	ND	ND	ND	ND	ND	ND	ND
Nitrobenzene	0.0079	ND	ND	ND	ND	ND	ND	ND	0.12^{MI}
N-Nitroso-di-n-propylamine	0.00068	ND ^E	ND ^E	ND ^E					
Pentachlorophenol	0.0043	ND	ND	ND	ND	ND	3.0^{MI}	4.0^{MI}	13.0^{MI}
Phenanthrene	39	ND	ND	ND	ND	ND	ND	ND	ND
Pyrene	87	ND	ND	ND	ND	ND	0.30J	ND	ND
1,2,3-Trichloropropane	3.1x 10 ⁻⁵	X	ND	X	ND	X	ND	X	ND

BOLD	Exceed ADEC most stringent clean up level
1	18AAC75.341 most stringent cleanup level, under 40 inch, table B1 and table B2
J	Result is less than the reporting limit but greater than or equal to the mean detection limit and the concentration is considered an approximate value.
MI	Matrix interference is present and surrogate recovery for sample was outside control limit. Sample results may be biased.
E	Method detection limit is greater than the most stringent ADEC cleanup level (18AAC75.341, table B2)
Y	Detected hydrocarbons appear to be due to oil and biogenic interference
	Most stringent cleanup level is a human health based level and not migration to groundwater.

Table 2. Metal, mercury, PCBs

	ADEC Cleanup Level ¹	TP-01-SO	TP-02-SO	TP-04-SO	TP-06-SO	TP-07-SO	TP-08-SO
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Arsenic	0.2	4.4	20	12	7.4	X	7.5
Barium	2100	170	180	130	140	X	120
Cadmium	9.1	0.42	0.5926	0.36	0.41	X	0.45
Chromium	1.0 x 10 ⁵	28	15	22	24	X	20
Lead	400	9.7	1.1	7.5	10	X	8.7
Selenium	6.9	1	1.1	0.76	0.78	X	0.65
Silver	11	1.8	0.15	0.11	0.11	X	0.071
Mercury	0.36	X	X	0.12	0.064	X	0.016
PCBs	1.0	X	X	X	ND	ND	ND

BOLD	Exceed ADEC most stringent clean up level
1	18AAC75.341 most stringent cleanup level, under 40 inch, table B1

Please note: lead and arsenic were detected in the method blank.

**Table 3. VOCs,
EDB (method 8011)**

	ADEC Cleanup Level ug/kg	TP-01-SO ug/kg	TP-02-SO ug/kg	TP-04-SO ug/kg	TP-06-SO ug/kg	TP-07-SO ug/kg	TP-08-SO ug/kg
benzene	22	0.86J ^C	x	ND ^C	ND ^C	0.62J ^C	ND ^C
1,2,4- trimethylbenzene	610	ND	x	89	ND	ND	ND
1,2-dibromoethane (ethylenedibromide)*	0.24	ND	x	ND	ND	ND	ND
1,2-dichloroethane (DCA)*	5.5	ND	x	ND	ND	ND	ND
1,3,5-trimethylbenzene	660	ND	x	39J	23J	ND	ND
ethylbenzene	130	ND	x	ND	ND	ND	ND
Isopropylbenzene(cumene)	5600	ND	x	ND	ND	ND	ND
methyl-t-butyl ether (MTBE)	400	ND	x	ND	39J	ND	26J
Xylenes	1500	34J	x	31J	ND	ND	ND
toluene	6700	ND	x	ND	ND	ND	ND
n-butylbenzene	23000	ND	x	18J	ND	ND	ND
sec-butylbenzene	42000	ND	x	ND	ND	ND	ND
ter-butylbenzene	11000	ND	x	ND	ND	ND	ND
naphthalene	38	ND	x	11 HB	36HB	23HB	16HB
hexachlorobutadiene	20	ND ^C	x	4.6JHBC ^C	ND ^C	ND ^C	ND ^C
n-propylbenzene	9100	ND	x	14J	ND	ND	ND
1,2-dibromoethane (ethylenedibromide)*	0.24	X	ND ^{MI}	ND ^{H,MI}	ND ^{MI}	X	ND ^{MI}
1,2-dichloroethane (DCA)*	5.5	ND	x	ND	ND	ND	ND

BOLD	Exceed ADEC most stringent clean up level
1	18AAC75.341 most stringent cleanup level, under 40 inch, table B1 and table B2
J	Result is less than the reporting limit but greater than or equal to the mean detection limit and the concentration is considered an approximate value.
MI	Matrix interference is present and surrogate recovery for sample was outside control limit. Sample results may be biased.
E	Method detection limit is greater than the most stringent ADEC cleanup level (18AAC75.341, table B2)
Y	Detected hydrocarbons appear to be due to oil and biogenic interference
B	Compound was found in the blank
H	Sample was prepared or analyzed outside of specified hold time.
C	Continuing calibration verification (CCV) analyzed was outside criteria and the results are considered an estimate
*	EDB and DCA were analyzed as part of EPA method 8011. They are also included in the regular VOC suite of EPA method 8260, Making these constituents appear twice in the table

Appendix G: Photographic log



Photo 1: Transformers located by school



Photo 2: Transformers located by school



Photo 3: Old BIA School Generator Shed



Photo 4: Staining on foundation of BIA shed



Photo 5: Possible tank?



Photo 6: Concrete cover – Possible UST cover



Photo 7: Fuel Header



Photo 8: Fuel Pipeline



Photo 9: Transformer by Power Plant



Photo 10: Heavy staining on base of building



Photo 11: Diesel Tank



Photo 12: Soil staining west of the building

Appendix H - Human Health Conceptual Site Model Scoping Form and Standardized Graphic

Site Name:

File Number:

Completed by:

Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

General Instructions: Follow the italicized instructions in each section below.

1. General Information:

Sources (*check potential sources at the site*)

- | | |
|--|--|
| <input type="checkbox"/> USTs | <input type="checkbox"/> Vehicles |
| <input checked="" type="checkbox"/> ASTs | <input type="checkbox"/> Landfills |
| <input type="checkbox"/> Dispensers/fuel loading racks | <input type="checkbox"/> Transformers |
| <input type="checkbox"/> Drums | <input checked="" type="checkbox"/> Other: <input type="text" value="Generators"/> |

Release Mechanisms (*check potential release mechanisms at the site*)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Spills | <input type="checkbox"/> Direct discharge |
| <input checked="" type="checkbox"/> Leaks | <input type="checkbox"/> Burning |
| | <input type="checkbox"/> Other: <input type="text"/> |

Impacted Media (*check potentially-impacted media at the site*)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Surface soil (0-2 feet bgs*) | <input checked="" type="checkbox"/> Groundwater |
| <input checked="" type="checkbox"/> Subsurface soil (>2 feet bgs) | <input checked="" type="checkbox"/> Surface water |
| <input type="checkbox"/> Air | <input checked="" type="checkbox"/> Biota |
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Other: <input type="text"/> |

Receptors (*check receptors that could be affected by contamination at the site*)

- | | |
|---|--|
| <input type="checkbox"/> Residents (adult or child) | <input checked="" type="checkbox"/> Site visitor |
| <input type="checkbox"/> Commercial or industrial worker | <input checked="" type="checkbox"/> Trespasser |
| <input type="checkbox"/> Construction worker | <input type="checkbox"/> Recreational user |
| <input checked="" type="checkbox"/> Subsistence harvester (i.e. gathers wild foods) | <input type="checkbox"/> Farmer |
| <input checked="" type="checkbox"/> Subsistence consumer (i.e. eats wild foods) | <input type="checkbox"/> Other: <input type="text"/> |

* bgs - below ground surface

2. Exposure Pathways: (*The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".*)

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface?
(Contamination at deeper depths may require evaluation on a site-specific basis.)

If the box is checked, label this pathway complete:

Complete

Comments:

DRO: 1,600 mg/kg; Naphthalene 0.049 mg/kg; Pentachlorophenol: up to 0.13 mg/kg;
1,2,4 - trimethylbenzene: up to 6.2 mg/kg; 1,3,5 - trimethylbenzene at 1.5 mg/kg; and vinyl chloride at
0.0074 mg/kg.

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface?
(Contamination at deeper depths may require evaluation on a site specific basis.)

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)?

If both boxes are checked, label this pathway complete:

Incomplete

Comments:

Pentachlorophenol and 2,6 - dinitrotoluene are present but in concentrations above MTG but below Human Health

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater,
or are contaminants expected to migrate to groundwater in the future?

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350.

If both boxes are checked, label this pathway complete:

Complete

Comments:

Groundwater is unknown

2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future?

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities).

If both boxes are checked, label this pathway complete:

Complete

Comments:

TAH and TAqH were below Alaska Water Quality standards;

3. Ingestion of Wild and Farmed Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild or farmed foods?

Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)?

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.)

If all of the boxes are checked, label this pathway complete:

Comments:

None of the contaminants are bioaccumulative

c) Inhalation-

1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.)

Are the contaminants in soil volatile (see Appendix D in the guidance document)?

If both boxes are checked, label this pathway complete:

Complete

Comments:

Naphthalene, 1,2,4 - trimethylbenzene, 1,3,5 - trimethylbenzene, and vinyl chloride are present in surface soil above most stringent, but below human health levels.

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminted soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures)



Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)?



If both boxes are checked, label this pathway complete:

Incomplete

Comments:

Building is abandoned

3. Additional Exposure Pathways: (Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)

Dermal Exposure to Contaminants in Groundwater and Surface Water

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- Climate permits recreational use of waters for swimming.
- Climate permits exposure to groundwater during activities, such as construction.
- Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are deemed protective of this pathway because dermal absorption is incorporated into the groundwater exposure equation for residential uses.

Check the box if further evaluation of this pathway is needed:

Comments:

Inhalation of Volatile Compounds in Tap Water

Inhalation of volatile compounds in tap water may be a complete pathway if:

- The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

DEC groundwater cleanup levels in 18 AAC 75, Table C are protective of this pathway because the inhalation of vapors during normal household activities is incorporated into the groundwater exposure equation.

Check the box if further evaluation of this pathway is needed:

Comments:

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers (Particulate Matter - PM₁₀). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.

DEC human health soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because the inhalation of particulates is incorporated into the soil exposure equation.

Check the box if further evaluation of this pathway is needed:

Comments:

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

- Climate permits recreational activities around sediment.
- The community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

Check the box if further evaluation of this pathway is needed:

Comments:

4. Other Comments (*Provide other comments as necessary to support the information provided in this form.*)

A large, empty rectangular box with a thin black border, occupying most of the page below the question. It is intended for the respondent to write their comments in.

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Tuluksak Old Power Plant

Completed By: L Griswold

Date Completed: 1/28/20

Instructions: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.

(1)	(2)												
Check the media that could be directly affected by the release.	For each medium identified in (1), follow the top arrow and check possible transport mechanisms. Check additional media under (1) if the media acts as a secondary source.												
Media <table border="1"> <thead> <tr> <th colspan="2">Transport Mechanisms</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Surface Soil (0-2 ft bgs)</td> <td> <input checked="" type="checkbox"/> Direct release to surface soil <input type="checkbox"/> check soil <input checked="" type="checkbox"/> Migration to subsurface <input type="checkbox"/> check soil <input checked="" type="checkbox"/> Migration to groundwater <input type="checkbox"/> check groundwater <input checked="" type="checkbox"/> Volatilization <input type="checkbox"/> check air <input checked="" type="checkbox"/> Runoff or erosion <input type="checkbox"/> check surface water <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____ </td> </tr> <tr> <td><input type="checkbox"/> Subsurface Soil (2-15 ft bgs)</td> <td> <input type="checkbox"/> Direct release to subsurface soil <input type="checkbox"/> check soil <input type="checkbox"/> Migration to groundwater <input type="checkbox"/> check groundwater <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____ </td> </tr> <tr> <td><input type="checkbox"/> Ground-water</td> <td> <input type="checkbox"/> Direct release to groundwater <input type="checkbox"/> check groundwater <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Flow to surface water body <input type="checkbox"/> check surface water <input type="checkbox"/> Flow to sediment <input type="checkbox"/> check sediment <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____ </td> </tr> <tr> <td><input type="checkbox"/> Surface Water</td> <td> <input type="checkbox"/> Direct release to surface water <input type="checkbox"/> check surface water <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Sedimentation <input type="checkbox"/> check sediment <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____ </td> </tr> <tr> <td><input type="checkbox"/> Sediment</td> <td> <input type="checkbox"/> Direct release to sediment <input type="checkbox"/> check sediment <input type="checkbox"/> Resuspension, runoff, or erosion <input type="checkbox"/> check surface water <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____ </td> </tr> </tbody> </table>		Transport Mechanisms		<input checked="" type="checkbox"/> Surface Soil (0-2 ft bgs)	<input checked="" type="checkbox"/> Direct release to surface soil <input type="checkbox"/> check soil <input checked="" type="checkbox"/> Migration to subsurface <input type="checkbox"/> check soil <input checked="" type="checkbox"/> Migration to groundwater <input type="checkbox"/> check groundwater <input checked="" type="checkbox"/> Volatilization <input type="checkbox"/> check air <input checked="" type="checkbox"/> Runoff or erosion <input type="checkbox"/> check surface water <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____	<input type="checkbox"/> Subsurface Soil (2-15 ft bgs)	<input type="checkbox"/> Direct release to subsurface soil <input type="checkbox"/> check soil <input type="checkbox"/> Migration to groundwater <input type="checkbox"/> check groundwater <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____	<input type="checkbox"/> Ground-water	<input type="checkbox"/> Direct release to groundwater <input type="checkbox"/> check groundwater <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Flow to surface water body <input type="checkbox"/> check surface water <input type="checkbox"/> Flow to sediment <input type="checkbox"/> check sediment <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____	<input type="checkbox"/> Surface Water	<input type="checkbox"/> Direct release to surface water <input type="checkbox"/> check surface water <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Sedimentation <input type="checkbox"/> check sediment <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____	<input type="checkbox"/> Sediment	<input type="checkbox"/> Direct release to sediment <input type="checkbox"/> check sediment <input type="checkbox"/> Resuspension, runoff, or erosion <input type="checkbox"/> check surface water <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____
Transport Mechanisms													
<input checked="" type="checkbox"/> Surface Soil (0-2 ft bgs)	<input checked="" type="checkbox"/> Direct release to surface soil <input type="checkbox"/> check soil <input checked="" type="checkbox"/> Migration to subsurface <input type="checkbox"/> check soil <input checked="" type="checkbox"/> Migration to groundwater <input type="checkbox"/> check groundwater <input checked="" type="checkbox"/> Volatilization <input type="checkbox"/> check air <input checked="" type="checkbox"/> Runoff or erosion <input type="checkbox"/> check surface water <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____												
<input type="checkbox"/> Subsurface Soil (2-15 ft bgs)	<input type="checkbox"/> Direct release to subsurface soil <input type="checkbox"/> check soil <input type="checkbox"/> Migration to groundwater <input type="checkbox"/> check groundwater <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____												
<input type="checkbox"/> Ground-water	<input type="checkbox"/> Direct release to groundwater <input type="checkbox"/> check groundwater <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Flow to surface water body <input type="checkbox"/> check surface water <input type="checkbox"/> Flow to sediment <input type="checkbox"/> check sediment <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____												
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<input type="checkbox"/> Sediment	<input type="checkbox"/> Direct release to sediment <input type="checkbox"/> check sediment <input type="checkbox"/> Resuspension, runoff, or erosion <input type="checkbox"/> check surface water <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____												

(3) Check all exposure media identified in (2).

(4) Check all pathways that could be complete. The pathways identified in this column must agree with Sections 2 and 3 of the Human Health CSM Scoping Form.

(5) Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.

		Current & Future Receptors						
		Residents (adults or children)	Commercial or Industrial workers	Site visitors, trespassers, or recreational users	Construction workers	Farmers or subsistence harvesters	Subsistence consumers	Other
Exposure Media	soil	<input checked="" type="checkbox"/> Incidental Soil Ingestion	<input type="checkbox"/> Dermal Absorption of Contaminants from Soil	<input type="checkbox"/> Inhalation of Fugitive Dust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	groundwater	<input checked="" type="checkbox"/> Ingestion of Groundwater	<input type="checkbox"/> Dermal Absorption of Contaminants in Groundwater	<input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	air	<input checked="" type="checkbox"/> Inhalation of Outdoor Air	<input type="checkbox"/> Inhalation of Indoor Air	<input type="checkbox"/> Inhalation of Fugitive Dust	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Exposure Pathway/Route	surface water	<input checked="" type="checkbox"/> Ingestion of Surface Water	<input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water	<input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	sediment	<input type="checkbox"/> Direct Contact with Sediment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	biota	<input type="checkbox"/>	<input checked="" type="checkbox"/> Ingestion of Wild or Farmed Foods	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix H - Human Health Conceptual Site Model Scoping Form and Standardized Graphic

Site Name:

File Number:

Completed by:

Introduction

The form should be used to reach agreement with the Alaska Department of Environmental Conservation (DEC) about which exposure pathways should be further investigated during site characterization. From this information, summary text about the CSM and a graphic depicting exposure pathways should be submitted with the site characterization work plan and updated as needed in later reports.

General Instructions: Follow the italicized instructions in each section below.

1. General Information:

Sources (*check potential sources at the site*)

- | | |
|--|--|
| <input type="checkbox"/> USTs | <input type="checkbox"/> Vehicles |
| <input checked="" type="checkbox"/> ASTs | <input type="checkbox"/> Landfills |
| <input type="checkbox"/> Dispensers/fuel loading racks | <input type="checkbox"/> Transformers |
| <input type="checkbox"/> Drums | <input checked="" type="checkbox"/> Other: <input type="text" value="Generators"/> |

Release Mechanisms (*check potential release mechanisms at the site*)

- | | |
|--|--|
| <input checked="" type="checkbox"/> Spills | <input type="checkbox"/> Direct discharge |
| <input checked="" type="checkbox"/> Leaks | <input type="checkbox"/> Burning |
| | <input type="checkbox"/> Other: <input type="text"/> |

Impacted Media (*check potentially-impacted media at the site*)

- | | |
|---|--|
| <input checked="" type="checkbox"/> Surface soil (0-2 feet bgs*) | <input checked="" type="checkbox"/> Groundwater |
| <input checked="" type="checkbox"/> Subsurface soil (>2 feet bgs) | <input checked="" type="checkbox"/> Surface water |
| <input type="checkbox"/> Air | <input checked="" type="checkbox"/> Biota |
| <input type="checkbox"/> Sediment | <input type="checkbox"/> Other: <input type="text"/> |

Receptors (*check receptors that could be affected by contamination at the site*)

- | | |
|---|--|
| <input type="checkbox"/> Residents (adult or child) | <input checked="" type="checkbox"/> Site visitor |
| <input type="checkbox"/> Commercial or industrial worker | <input checked="" type="checkbox"/> Trespasser |
| <input type="checkbox"/> Construction worker | <input type="checkbox"/> Recreational user |
| <input checked="" type="checkbox"/> Subsistence harvester (i.e. gathers wild foods) | <input type="checkbox"/> Farmer |
| <input checked="" type="checkbox"/> Subsistence consumer (i.e. eats wild foods) | <input type="checkbox"/> Other: <input type="text"/> |

* bgs - below ground surface

2. Exposure Pathways: (*The answers to the following questions will identify complete exposure pathways at the site. Check each box where the answer to the question is "yes".*)

a) Direct Contact -

1. Incidental Soil Ingestion

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface?
(Contamination at deeper depths may require evaluation on a site-specific basis.)

If the box is checked, label this pathway complete:

Complete

Comments:

DRO: 14,000 mg/kg; RRO: 38000 mg/kg; hexachlorobenzene: 0.99 mg/kg; Pentachlorophenol: 13 mg/kg;
2,6 - dinitrotoluene 1.2 mg/kg; Nitrobenzene: 0.12 mg/kg;

2. Dermal Absorption of Contaminants from Soil

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface?
(Contamination at deeper depths may require evaluation on a site specific basis.)

Can the soil contaminants permeate the skin (see Appendix B in the guidance document)?

If both boxes are checked, label this pathway complete:

Complete

Comments:

Pentachlorophenol and 2,6 - dinitrotoluene are present but in concentrations above MTG but below Human Health

b) Ingestion -

1. Ingestion of Groundwater

Have contaminants been detected or are they expected to be detected in the groundwater,
or are contaminants expected to migrate to groundwater in the future?

Could the potentially affected groundwater be used as a current or future drinking water source? Please note, only leave the box unchecked if DEC has determined the groundwater is not a currently or reasonably expected future source of drinking water according to 18 AAC 75.350.

If both boxes are checked, label this pathway complete:

Complete

Comments:

Groundwater is unknown

2. Ingestion of Surface Water

Have contaminants been detected or are they expected to be detected in surface water, or are contaminants expected to migrate to surface water in the future?

Could potentially affected surface water bodies be used, currently or in the future, as a drinking water source? Consider both public water systems and private use (i.e., during residential, recreational or subsistence activities).

If both boxes are checked, label this pathway complete:

Complete

Comments:

Surface water is unknown

3. Ingestion of Wild and Farmed Foods

Is the site in an area that is used or reasonably could be used for hunting, fishing, or harvesting of wild or farmed foods?

Do the site contaminants have the potential to bioaccumulate (see Appendix C in the guidance document)?

Are site contaminants located where they would have the potential to be taken up into biota? (i.e. soil within the root zone for plants or burrowing depth for animals, in groundwater that could be connected to surface water, etc.)

If all of the boxes are checked, label this pathway complete:

Complete

Comments:

Hexachlorobenzene is present above MTG in surface soil

c) Inhalation-

1. Inhalation of Outdoor Air

Are contaminants present or potentially present in surface soil between 0 and 15 feet below the ground surface? (Contamination at deeper depths may require evaluation on a site specific basis.)

Are the contaminants in soil volatile (see Appendix D in the guidance document)?

If both boxes are checked, label this pathway complete:

Complete

Comments:

Hexachlorobenzene and Nitrobenzene are present in surface soil in concentrations exceeding migration to groundwater, but not human health.

2. Inhalation of Indoor Air

Are occupied buildings on the site or reasonably expected to be occupied or placed on the site in an area that could be affected by contaminant vapors? (within 30 horizontal or vertical feet of petroleum contaminated soil or groundwater; within 100 feet of non-petroleum contaminted soil or groundwater; or subject to "preferential pathways," which promote easy airflow like utility conduits or rock fractures)



Are volatile compounds present in soil or groundwater (see Appendix D in the guidance document)?



If both boxes are checked, label this pathway complete:

Incomplete

Comments:

Building is abandoned

3. Additional Exposure Pathways: (Although there are no definitive questions provided in this section, these exposure pathways should also be considered at each site. Use the guidelines provided below to determine if further evaluation of each pathway is warranted.)

Dermal Exposure to Contaminants in Groundwater and Surface Water

Dermal exposure to contaminants in groundwater and surface water may be a complete pathway if:

- Climate permits recreational use of waters for swimming.
- Climate permits exposure to groundwater during activities, such as construction.
- Groundwater or surface water is used for household purposes, such as bathing or cleaning.

Generally, DEC groundwater cleanup levels in 18 AAC 75, Table C, are deemed protective of this pathway because dermal absorption is incorporated into the groundwater exposure equation for residential uses.

Check the box if further evaluation of this pathway is needed:

Comments:

Inhalation of Volatile Compounds in Tap Water

Inhalation of volatile compounds in tap water may be a complete pathway if:

- The contaminated water is used for indoor household purposes such as showering, laundering, and dish washing.
- The contaminants of concern are volatile (common volatile contaminants are listed in Appendix D in the guidance document.)

DEC groundwater cleanup levels in 18 AAC 75, Table C are protective of this pathway because the inhalation of vapors during normal household activities is incorporated into the groundwater exposure equation.

Check the box if further evaluation of this pathway is needed:

Comments:

Inhalation of Fugitive Dust

Inhalation of fugitive dust may be a complete pathway if:

- Nonvolatile compounds are found in the top 2 centimeters of soil. The top 2 centimeters of soil are likely to be dispersed in the wind as dust particles.
- Dust particles are less than 10 micrometers (Particulate Matter - PM₁₀). Particles of this size are called respirable particles and can reach the pulmonary parts of the lungs when inhaled.

DEC human health soil cleanup levels in Table B1 of 18 AAC 75 are protective of this pathway because the inhalation of particulates is incorporated into the soil exposure equation.

Check the box if further evaluation of this pathway is needed:



Comments:

DRO and RRO are present in concentrations exceeding Table B.2 inhalation cleanup levels

Direct Contact with Sediment

This pathway involves people's hands being exposed to sediment, such as during some recreational, subsistence, or industrial activity. People then incidentally ingest sediment from normal hand-to-mouth activities. In addition, dermal absorption of contaminants may be of concern if the the contaminants are able to permeate the skin (see Appendix B in the guidance document). This type of exposure should be investigated if:

- Climate permits recreational activities around sediment.
- The community has identified subsistence or recreational activities that would result in exposure to the sediment, such as clam digging.

Generally, DEC direct contact soil cleanup levels in 18 AAC 75, Table B1, are assumed to be protective of direct contact with sediment.

Check the box if further evaluation of this pathway is needed:



Comments:

4. Other Comments (*Provide other comments as necessary to support the information provided in this form.*)

A large, empty rectangular box with a thin black border, occupying most of the page below the question. It is intended for the respondent to write their comments in.

HUMAN HEALTH CONCEPTUAL SITE MODEL GRAPHIC FORM

Site: Tuluksak Old Power Plant

Completed By: L Griswold

Date Completed: 1/28/20

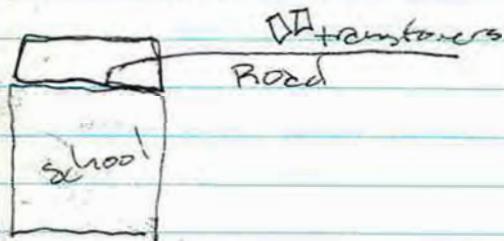
(1)	(2)
Media	Transport Mechanisms
Surface Soil (0-2 ft bgs)	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> Direct release to surface soil <input type="checkbox"/> check soil <input checked="" type="checkbox"/> Migration to subsurface <input type="checkbox"/> check soil <input checked="" type="checkbox"/> Migration to groundwater <input type="checkbox"/> check groundwater <input checked="" type="checkbox"/> Volatilization <input type="checkbox"/> check air <input checked="" type="checkbox"/> Runoff or erosion <input type="checkbox"/> check surface water <input checked="" type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____
Subsurface Soil (2-15 ft bgs)	<ul style="list-style-type: none"> <input type="checkbox"/> Direct release to subsurface soil <input type="checkbox"/> check soil <input type="checkbox"/> Migration to groundwater <input type="checkbox"/> check groundwater <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____
Ground-water	<ul style="list-style-type: none"> <input type="checkbox"/> Direct release to groundwater <input type="checkbox"/> check groundwater <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Flow to surface water body <input type="checkbox"/> check surface water <input type="checkbox"/> Flow to sediment <input type="checkbox"/> check sediment <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____
Surface Water	<ul style="list-style-type: none"> <input type="checkbox"/> Direct release to surface water <input type="checkbox"/> check surface water <input type="checkbox"/> Volatilization <input type="checkbox"/> check air <input type="checkbox"/> Sedimentation <input type="checkbox"/> check sediment <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____
Sediment	<ul style="list-style-type: none"> <input type="checkbox"/> Direct release to sediment <input type="checkbox"/> check sediment <input type="checkbox"/> Resuspension, runoff, or erosion <input type="checkbox"/> check surface water <input type="checkbox"/> Uptake by plants or animals <input type="checkbox"/> check biota <input type="checkbox"/> Other (list): _____

Instructions: Follow the numbered directions below. Do not consider contaminant concentrations or engineering/land use controls when describing pathways.

(3)		(4)		(5)				
Exposure Media		Exposure Pathway/Route		Identify the receptors potentially affected by each exposure pathway: Enter "C" for current receptors, "F" for future receptors, "C/F" for both current and future receptors, or "I" for insignificant exposure.				
				Current & Future Receptors				
				Residents (adults or children)	C/F	C/F	C/F	
				Commercial or Industrial workers	C/F	C/F	C/F	
				Site visitors, trespassers, or recreational users	C/F	C/F	C/F	
				Construction workers	C/F	C/F	C/F	
				Farmers or subsistence hunters	C/F	C/F	C/F	
				Subsistence consumers	C/F	C/F	C/F	
				Other	C/F	C/F	C/F	
<input checked="" type="checkbox"/> soil		<input checked="" type="checkbox"/> Incidental Soil Ingestion <input checked="" type="checkbox"/> Dermal Absorption of Contaminants from Soil <input checked="" type="checkbox"/> Inhalation of Fugitive Dust						
<input checked="" type="checkbox"/> groundwater		<input checked="" type="checkbox"/> Ingestion of Groundwater <input type="checkbox"/> Dermal Absorption of Contaminants in Groundwater <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water				C/F	C/F	C/F
<input checked="" type="checkbox"/> air		<input checked="" type="checkbox"/> Inhalation of Outdoor Air <input type="checkbox"/> Inhalation of Indoor Air <input type="checkbox"/> Inhalation of Fugitive Dust				C/F	C/F	C/F
<input checked="" type="checkbox"/> surface water		<input checked="" type="checkbox"/> Ingestion of Surface Water <input type="checkbox"/> Dermal Absorption of Contaminants in Surface Water <input type="checkbox"/> Inhalation of Volatile Compounds in Tap Water				C/F	C/F	C/F
<input type="checkbox"/> sediment		<input type="checkbox"/> Direct Contact with Sediment						
<input checked="" type="checkbox"/> biota		<input checked="" type="checkbox"/> Ingestion of Wild or Farmed Foods				C/F	C/F	C/F

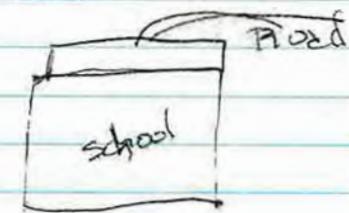
8/20/19

- 0800 start work at school
 0930 present to Mrs. Mitchell's class
 1000 meet TAC @ office
 1030 meet TAC office
 1100 travel to old school
 1110 note transformers across from new school



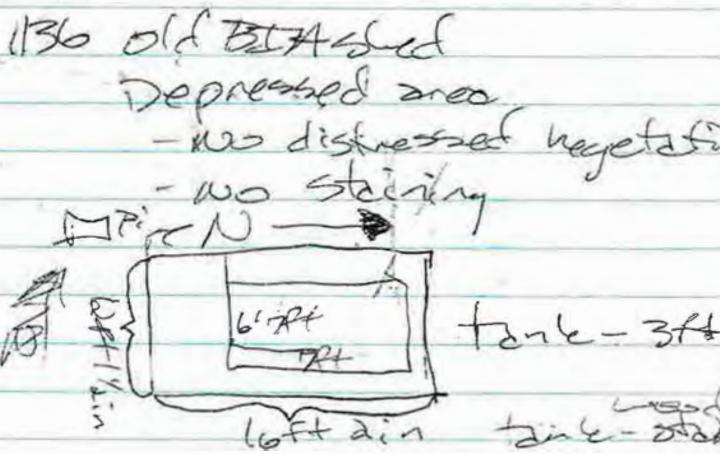
- 1118 visit sewage lagoon behind school

* school yrs,
 supposed to
 be connected
 to new
 lagoon in
 2015



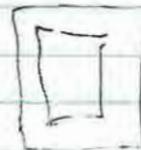
* still used by school
 * lagoon on 1972 map

N 59.51534 > lagoon location
 W 139.70842



foundation boards are stable

N 59.51534 > BIA school
 W 139.70842 > location



colorado + lucco
 cover

no staining

scrapt + go
 discuss
 tanks

1156 14" tall & ^{soil} tide room
 2 1/2 ft across

1205 Lynch

1310[#] Back on BIA side

N61.10129

W160.96004

1316 outfall location

59° sunny light breeze

1334 BIA shed building

southside of building TS-02

westside ~~under~~ building TS-03

Northwest corner building TS-04

Northeast corner building TS-05

1350 possible OST location

Northside of concrete top + TS-06

east side of concrete top TS-07

Battery found - cracked

Noah Wiley

• tanks underground

• wants investigated

1405 collect PID readings
at vehicle1435 pick up sample coolers
at IGRAP officeorganize sample jars at
IGRAP officepick up gel ice +
CO2 School1505 Back @ BIA school site
prep for sample collection

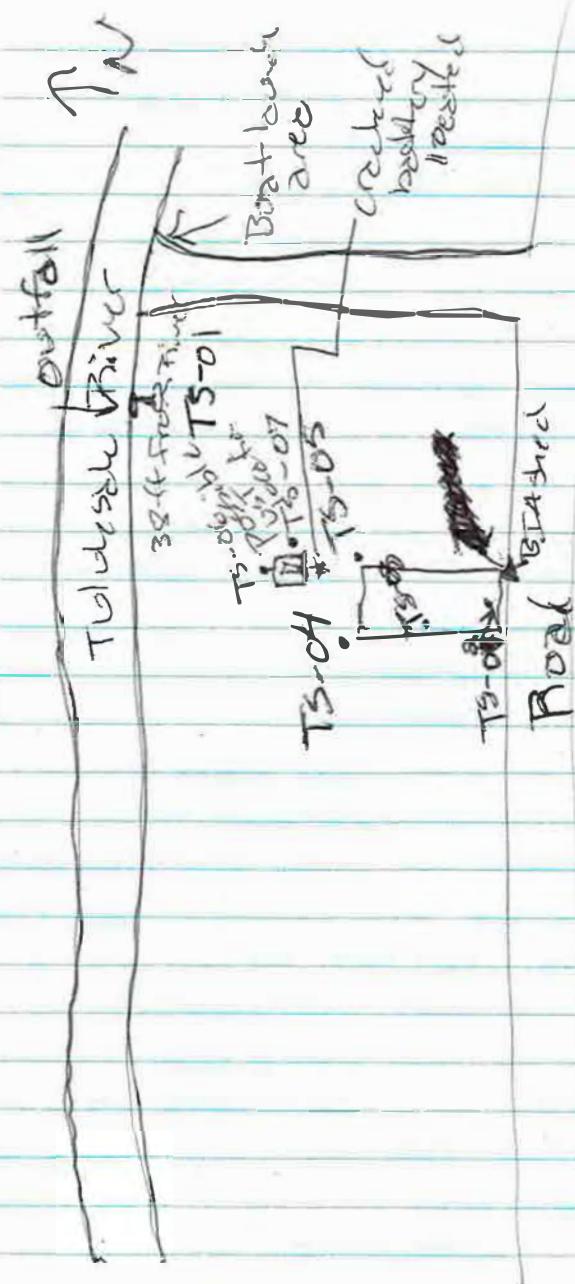
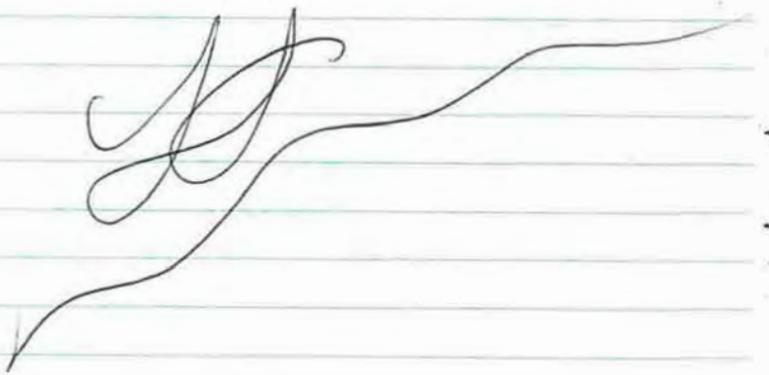
Type	Soil ID	Depth	PID
1317 1402	RUSTIC SOIL DENSE	TS-01	Scraped
1615 1615	SILTY	-50	surface
1339 1406	non-native more sand organic mat	TS-02	Scraped
1528 1530	more gravel	-50	surface
1341 1407	"	TS-03	Scraped
1535 1535	debris lots of	-50	surface
1345 1408	organic	TS-04	Scraped
1543 1546	tacon rock	-50	surface
1349 1408	rusty not bolts seen	TS-05	Scraped
1550 1554	wet	-50	surface
1353 1411	organic matter	TS-06	Scraped
1354 1411	grass	-50	surface
1355 1411	sediment	TS-07	Scraped
1601 1605	sandy	-50	surface
	less organic		depth through plants

1601 1605 * TS-06 not sampled +

lab due to debris



Time	Soil	ID	Depth	XRF
1325	" "	TS-01	scrappd S. Face	Manganese Copper Zinc As Pb
		-50		
1417	" "	TS-02	scrappd	Zinc Iron
		-50.	surface	
1418	" "	TS-03	" "	Manganese Zinc Iron
		-50		
1418	" "	TS-04	" "	Manganese Zinc Iron
		-50		
1419	" "	TS-05	" "	Manganese Zinc Iron Cu
1419	" "	TS-06	" "	Manganese Zinc Iron
1420	" "	TS-07	" "	Manganese Zinc



THE SECRET

* see log for sample times
1620 off site

1625 TO AT office

pick up cooler

1628 Find transformer "37 1/2"
"Waukesha Wisconsin"
N 61.09795
W 160.95432

By Mike Wepoeka's house

All homes are on
honey buckets

1633 At powerplant site

- Transformer - NO PCB label

- Fridge

- empty 55 gallon drum

N 61.09691

W 160.94791

"Southern Debris Area"

- More drums = 5

- 2 leaking

- stained soil + dead veg
by back drum

Chevron Dell Motor oil

Powerplant building, stained
1 55 gal drum
"Unitech"

empty propane bottles
live insulators

Building base smells of fuel
NO vegetation under building

1650 Found AST

disconnected from fuel line
hanger present

- hanger full

- has standing water

labeled #2 Diesel

1657 Fuel header

N 61.09722

W 160.94724

1701 off site

1730 UNPACK vehicle

1730 - 1900 Dinner

1900 package + label jars for
Sampling KIAF

2100 Done



8/21/19 sunny light breeze 59°
 1800 Pack for River trip
 1000 meet @ IGA
 1039 @ BIA School site
 for River sampling

TS-08-W 1055
 TS-09-W 1052
 TS-10-W 1050

N 61.0928
 W 160.95967
 1100 pack boat
 1150 leave Toloksele
 1159 Side creek background sample
 Small Bogus creek
 TR - 15 + W 1204
 N 61.11734
 W 160.88481

1303 DFLA location
 N 61.07988 fresh
 W 160.65460 2nd inst +
 Crusted
 Drn
 DFLA location

N 61.08009 single drum
 W 160.68445 empty

N 61.08009 single drum
 W 160.68431 crusted empty

N 61.08015 single drum
 W 160.68436 crusted empty

N 61.08008 3 drums
 W 160.68417

N 61.08017 # crusted
 W 160.68417

* N 61.08031 sampled (bulky debris)
 W 160.68396 * full boat

N 61.08035 1 drum
 W 160.68385 bullet hole

N 61.08005 1 drum
 W 160.68396 no holes

N 61.08055 W 160.68332	Dredge group 7 drums
N 61.08084 W 160.68300	8 drums
N 61.08079 W 160.68329	1 crushed drum
N 61.08078 W 160.68347	partially crushed open end
N 61.08086 W 160.68465	open end
N 61.08079 W 160.68579	2 drums empty
N 61.08061 W 160.68448	partially crushed empty
N 61.08046 W 160.68414	closed drum

1343 TB - 02 - 50
TB - 07 - 50
lots of organic matter
4 inches deep
- depression -

N 61.07990
W 160.68468

1408 Fog River
TB - 10 - W
N 61.06289
W 160.67731

1412 Tululsaik River
TB - 11 - W
N 61.06390
W 160.67273

1456 Tululsaik River
Fish Weir
TB - 12 - W
N 61.04403
W 160.59408

1545 Turn around

N 61.00199

W 160.558369

Post cabin

1805 In bank draw

N 61.11368

W 160.81088

1834 Boat landing water collection

TR - 13 - W ~~on~~

TR - 14 - W \Rightarrow Duplicate

N 61.09875

W 160.96922

1844 Land back in Tuktsuk

1900 off shift

2000 Prep for 8/22 sampling

2145 Done for day

YJ

8/22/19 sunny cool no breeze

0800 Wake up for travel to site

0900 Head to new plant

0917 on S, + E tank

0917 TP - 01 - SO

N 61.09641

W 160.94769

S Debris Area

0939 TP - 02 - SO

N 61.09682

W 160.94785

0941 S draw

N 61.09692

W 160.94818

Marked w/ Jet A "label

20 ft

0959 TP - 03 - SO

N 61.09682

W 160.94791

"Chevron DELO

motor oil SAE 40"

2 draws w/ label

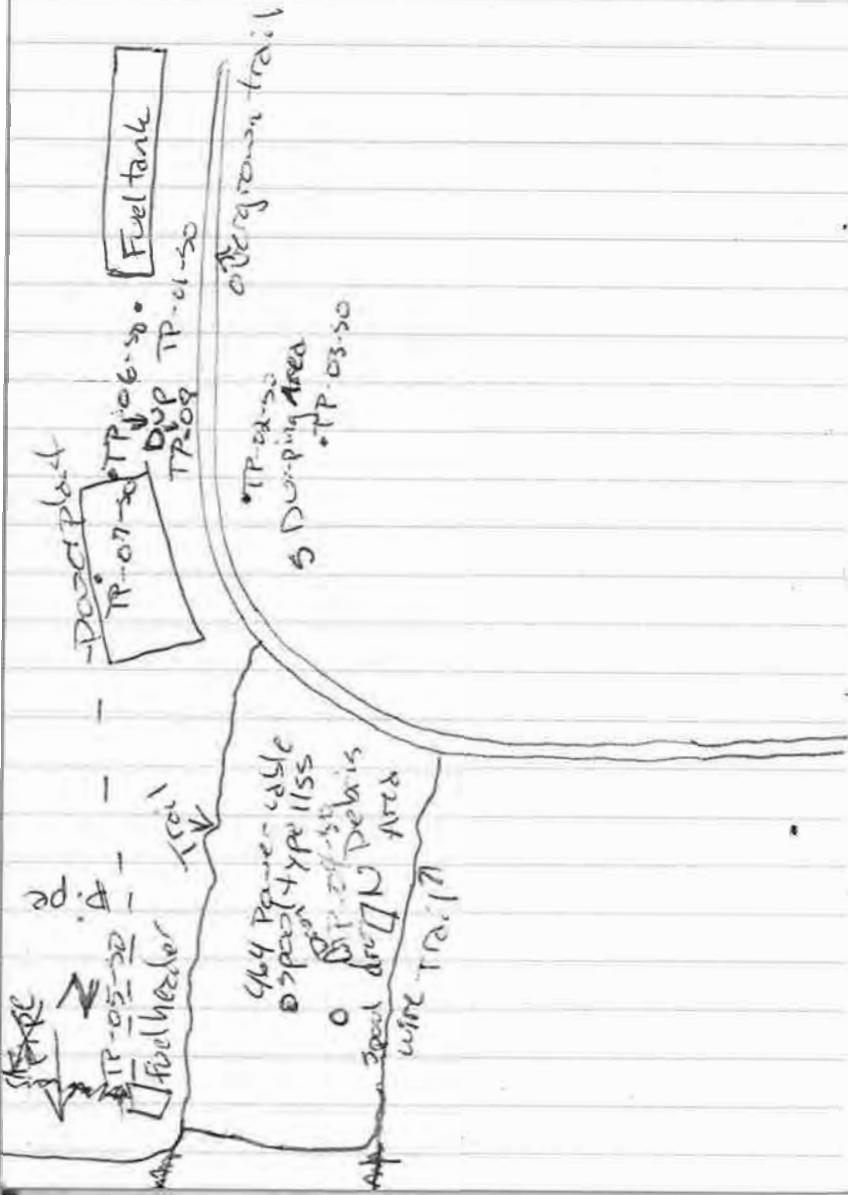
silty

reddish

less org

Time	soil ID	Depth	ED	Depth
0917 1000	TP-01 orange silt soil	-50	scrapped	4000 ppm diesel color
1120 1127	10am	-50	soil	
0929 1016	Silt	TP-02	scrapped	1.2 ppm
X 1140	10am	-50	soil	odd color
0941 1019	silt	TP-03	scrapped	0.5 ppm
X 1142	-50	soil	woodier	
1005 1000	heavy vegetation	TP-04	scrapped	0.1 ppm
1147 1147	silt loam soil organic	-50	soil	
1045 1120	sandier loamy vegetation	TP-05	beneath	0.1 ppm
X 1154	new grass	-50	veg	
1054 1121	sandy permeated	TP-06	2 in	6.5 ppm
1159 1003	✓ fuel	-50		
1059 1122	sandy richen	TP-07	2-3 in	205.2 ppm
1209	-50			
X X 1205	X	TP-08	Dust off	X
1201 1205	-50	TP-06		

Time	Location	ID	Depth	X
0921	North B area Point ch tank			Mn
0924	1000 B area tanks			As
1027	West side tank point			As, Rb
0930	2000 West side tank point			Mg, Fe, Ca, Co Rb, Sc
0946	TP-03-50			Nore
0947	TP-02-50			No
1007	TP-04-50			As, Cd
1026	BCH wire spool			Fe, Zn
1049	Fuel Heels TP-05-50			Fe
1056	TP-06-50			Pb
1102	TP-07-50			Rb



1001 North Debris Mee
 1 down outside w/ fluid
 + 4 feet
 N 61. 09716
 W 160. 94771

1005 TP - 04-50 silt loam
 some sand
 organics

1024 2 spoils wire 1 bare wire
 N 61. 09712 1 coating
 W 160. 94765
 " 4641 power cable 600v.
 type 11ss
 Kapphene Aluminum
 Aluminum

1033 electrical equipment
 N 61. 09707
 W 160. 94766
 copper wire
 black cable
 363-0021 Return EOL - PJ

1038 Fuel header
 N 61. 09722
 W 160. 94724
 TP - 05-33

1053 TP-06-50

N 61.09688

W 160.94757

Bil dripping off building

1059 TP-07-50

N 61.09690

W 160.94748

1215 offsite

1230 lunch

1300 prep samples for transport

1415 Head to Corp office

1430 Go to airport

Flight delayed

Leave Tuktooak

Bethel

leave Bethel

land in Anchorage

Drop off equipment

C office

2045 Done for day

Trip complete

✓✓✓

"Rite in the Rain®
ALL-WEATHER WRITING PAPER



Name _____

Address _____

Phone _____

Object _____

August 2019

CONTENTS

PAGE

REFERENCE

DATE

Tuluksak Site Disney

2 PID calibrator
Cleaning Sampling Supplies.

8/15/19

8/15/2019

16/2019 EM

7

ID Calibrated according
to manufacturer instructions
using 100 ppm isobutylene
as.

16/2019

Sampling spoon and tongs
decontaminated with
degreen and water. and
held in clean poly bags.

7/9

Used XRF instrument.
CS well. Batteries need
recharging.



Environment Testing
TestAmerica



ANALYTICAL REPORT

Eurofins TestAmerica, Seattle
5755 8th Street East
Tacoma, WA 98424
Tel: (253)922-2310

Laboratory Job ID: 580-88695-1
Client Project/Site: Tuluksak

For:

Alaska Department of Env. Conservation
Post Office Box 1542
Haines, Alaska 99827

Attn: Anne Marie Palmieri

Kristine D. Allen

Authorized for release by:

9/30/2019 5:25:13 PM

Kristine Allen, Manager of Project Management
(253)248-4970

kristine.allen@testamericainc.com

Designee for

Elaine Walker, Project Manager II
(253)248-4972
elaine.walker@testamericainc.com

LINKS

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results through

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Expert

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Case Narrative

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Job ID: 580-88695-1

Laboratory: Eurofins TestAmerica, Seattle

Narrative

Job Narrative 580-88695-1

Receipt

Twenty-eight samples were received on 8/26/2019 12:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.5° C and 1.8° C.

Receipt Exceptions

The container labels for metals have the incorrect metals method on all containers. The nitric poly has Diss Metals however this is the container for Total Metals/Hardness. The Laboratory will use the correct container for the analysis needed. However, there is not an unpreserved container provided for Diss metals for sample TS-16-W (580-88695-21). The single container provided was a nitric preserved therefore only Total Metals/Hardness can be run on this. This sample was logged for Total metals/Hardness and confirmed by the client.

The sample time for TP-01-SO(580-88695-2) was not listed on the COC. The sample time of 1127am was taken from the container label and confirmed by the client.

Only 1 container was provided for the following samples TS-08-W (580-88695-19) and TS-09-W (580-88695-20) for 8270DSIM PAH analysis.

Only 1 Voa vial was provided for the following samples TS-08-W (580-88695-19) and TS-09-W (580-88695-20) for 8260C-BTEX analysis.

Many of the container labels had sample times that did not match the COC. All samples were logged in using the COC times and confirmed by the client.

An additional container was not provided for hardness although this container was provided in the bottle order. This may cause issues with sample volume needed for all analysis.

The field sampler was not provided on the COC.

GC/MS VOA

Method(s) 624, 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch analytical batch 580-309932 recovered outside control limits for the following analytes: m-Xylene & p-Xylene and Ethylbenzene. The individual recoveries of both the LCS and LCSD met the acceptance criteria.

Method(s) 8260C: The method blank for preparation batch 580-309944 and analytical batch 580-310039 contained Acetone above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-309944 and analytical batch 580-310039 recovered outside control limits for 4-Methyl-2-pentanone. This analytes was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 580-310228 recovered outside acceptance criteria, low biased, for Dichlorodifluoromethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 580-310228 recovered above the upper control limit for Bromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: TP-04-SO (580-88695-1), TP-01-SO (580-88695-2), TP-06-SO (580-88695-6), TP-07-SO (580-88695-7), TP-08-SO (580-88695-8) and Trip Blank (580-88695-9).

Method(s) 8260C: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-310228 was outside criteria for the following analyte(s): 2-Butanone, Trichloroethene and Benzene. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Case Narrative

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Job ID: 580-88695-1 (Continued)

Laboratory: Eurofins TestAmerica, Seattle (Continued)

Method(s) 8260C: Surrogate recovery for the following samples were outside control limits: TP-04-SO (580-88695-1), TP-01-SO (580-88695-2), TP-06-SO (580-88695-6), TP-07-SO (580-88695-7), TP-08-SO (580-88695-8) and Trip Blank (580-88695-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C: Reanalysis of the following sample was performed outside of the analytical holding time due to failure of quality control parameters in the initial analysis. TS-01-SO (580-88695-11), TS-02-SO (580-88695-12), TS-03-SO (580-88695-13), TS-04-SO (580-88695-14).

Method(s) 8260C: Surrogate recovery for the following sample was outside control limits: TS-07-SO (580-88695-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C: Surrogate recovery for the following samples were outside control limits: TP-04-SO (580-88695-1), TP-01-SO (580-88695-2), TP-06-SO (580-88695-6), TP-07-SO (580-88695-7), TP-08-SO (580-88695-8) and Trip Blank (580-88695-9). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C SIM: The continuing calibration verification (CCV) associated with batch 580-309985 recovered outside acceptance criteria, low biased, for 2-Hexanone, Benzene, and Bromomethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8260C SIM: The continuing calibration verification (CCV) associated with batch 580-309985 recovered above the upper control limit for Dibromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCVIS 580-309985/3) and (CCVL 580-309985/6).

Method(s) 8260C SIM: The method blank for preparation batch 580-309975 and analytical batch 580-309985 contained Naphthalene, Chloroform and Hexachlorobutadiene above the method detection limit. This target analyte concentration was less than the reporting limit (1/2RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260C SIM: Surrogate recovery for the following samples and QC were outside the upper control limit: TS-01-SO (580-88695-11), TS-02-SO (580-88695-12), (LCSD 580-309975/3-A) and (MB 580-309975/1-A). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C SIM: The following analyte(s) recovered outside control limits for the LCS associated with preparation batch 580-309975 and analytical batch 580-309985: 1,1,2-Trichloroethane. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) 8260C SIM: The laboratory control sample duplicate (LCSD) for preparation batch 580-309975 and analytical batch 580-309985 recovered outside control limits for the following analytes: 1,1-Dichloroethene, Chloroform, Dibromomethane, Dichlorobromomethane, Trichloroethane, and Vinyl Chloride. These analytes were biased high in the LCSD and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C SIM: The continuing calibration verification (CCV) associated with batch 580-309985 recovered outside acceptance criteria, low biased, for 2-Hexanone, Benzene, and Bromomethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8260C SIM: The continuing calibration verification (CCV) associated with batch 580-309985 recovered above the upper control limit for Dibromomethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: (CCVIS 580-309985/3) and (CCVL 580-309985/6).

Method(s) 8260C SIM: The method blank for preparation batch 580-310134 and analytical batch 580-310106 contained Chloroform above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8260C SIM: The laboratory control sample (LCS) for preparation batch 580-310134 and analytical batch 580-310106 recovered

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Client: Alaska Department of Env. Conservation
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Laboratory: Eurofins TestAmerica, Seattle (Continued)

outside control limits for the following analytes: 1,2-Dichloroethane, Bromoform, and Vinyl chloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C SIM: The continuing calibration verification (CCV) associated with batch 580-310106 recovered above the upper control limit for Bromoform, Bromomethane, trans-1,3-Dichloropropene, and Vinyl Chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: TS-03-SO (580-88695-13), TS-04-SO (580-88695-14), TS-05-SO (580-88695-15), TS-07-SO (580-88695-16), (CCVIS 580-310106/3), (580-88685-B-2-G), (580-88685-B-2-H MS) and (580-88685-B-2-I MSD).

Method(s) 8260C SIM: The continuing calibration verification (CCV) associated with batch 580-310106 recovered outside acceptance criteria, low biased, for Naphthalene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8260C SIM: The method blank for preparation batch 580-310305 and analytical batch 580-310347 contained Naphthalene, Chloroform and cis-1,3-Dichloropropene above the method detection limit. This target analyte concentration was less than the reporting limit; therefore, re-extraction and/or re-analysis of samples was not performed

Method(s) 8260C SIM: The laboratory control sample (LCS) for preparation batch 580-310134 and analytical batch 580-310106 recovered outside control limits for the following surrogate: 1,2-Dichloroethane-d4. The analytes associated with this surrogate were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C SIM: The surrogate recovery for the blank associated with preparation batch 580-310134 and analytical batch 580-310106 was outside the upper control limits.

Method(s) 8260C SIM: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 580-310305 and analytical batch 580-310347 recovered outside control limits for the following analytes: 1,1-Dichloroethene, Benzene, Naphthalene, Tetrachloroethene, and Trichloroethene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260C SIM: The continuing calibration verification (CCV) associated with batch 580-310347 recovered outside acceptance criteria, low biased, for 1,1,2-Tetrachloroethane, 1,1-Dichloroethene, 1,4-Dichlorobenzene, Benzene, Bromomethane, Chloroform, Hexachlorobutadiene, Tetrachloroethene, and Trichloroethene. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8260C SIM: The minimum response factor (RF) criteria for the initial calibration verification (ICV) analyzed in batch 580-311181 was outside criteria for the following analyte: Tetrachloroethene. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method(s) 8260C SIM: The minimum response factor (RF) criteria for the initial calibration verification (ICV) analyzed in batch 580-311181 was outside criteria for the following analyte: Tetrachloroethene. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte is considered estimated.

Method(s) 8260C SIM: Due to QC failures for Hexachlorobutadiene and/or Naphthalene in analytical batch, 580-310347, the samples were re-analyzed outside of holding time. Both sets of data have been reported. TP-04-SO (580-88695-1), TP-06-SO (580-88695-6), TP-07-SO (580-88695-7), TP-08-SO (580-88695-8) and Trip Blank (580-88695-9)

Method(s) 8260C SIM: Surrogate recovery for the following samples were outside control limits: TP-06-SO (580-88695-6) and TP-08-SO (580-88695-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C SIM: Surrogate recovery for the following samples were outside the upper control limit: TS-01-SO (580-88695-11), TS-02-SO (580-88695-12). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260C SIM: Surrogate recovery for the following samples were outside the upper control limit: TS-03-SO (580-88695-13), TS-04-SO (580-88695-14), TS-07-SO (580-88695-16)). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

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Method(s) 8260C SIM: The following samples were analyzed outside of analytical holding time due to purge and trap being down to fix a leak: TS-03-SO (580-88695-13), TS-04-SO (580-88695-14), TS-05-SO (580-88695-15), TS-07-SO (580-88695-16) and (580-88685-B-2-G).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 580-310262 recovered above the upper control limit for 2,2'-oxybis[1-chloropropane] and 3-Nitroaniline. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: TS-01-SO (580-88695-11), TS-02-SO (580-88695-12), TS-03-SO (580-88695-13), TS-04-SO (580-88695-14), TS-05-SO (580-88695-15), TS-07-SO (580-88695-16) and (CCVIS 580-310262/3).

Method(s) 8270D: The method blank for preparation batch 580-310035 and analytical batch 580-310262 contained Butyl benzyl phthalate above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

Method(s) 8270D: The laboratory control sample (LCS) for preparation batch 580-310035 and analytical batch 580-310262 recovered outside control limits for the following analyte: Carbazole. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 580-310035 and analytical batch 580-310262 recovered outside control limits for the following analyte(s): Benzyl alcohol. Benzyl alcohol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Method(s) 8270D: The laboratory control sample (LCS) for preparation batch 580-310147 and analytical batch 580-310468 recovered outside control limits for the following analytes: Carbazole. This analyte was biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8270D: The following samples were diluted due to the nature of the sample matrix: TP-01-SO (580-88695-2), TP-02-SO (580-88695-3), TP-06-SO (580-88695-6), TP-07-SO (580-88695-7) and TP-08-SO (580-88695-8). Elevated reporting limits (RLs) are provided.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 580-310468 recovered outside acceptance criteria, low biased, for Benzyl alcohol. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported.

Method(s) 8270D: The continuing calibration verification (CCV) associated with batch 580-310468 recovered above the upper control limit for 2-Nitroaniline, Di-n-octyl phthalate, 2,2'-oxybis[1-chloropropane], Chlorophenol, 4,6-Dinitro-2-methylphenol, Bis(2-ethylhexyl) phthalate, Butyl benzyl phthalate and 4-Nitrophenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: (CCVIS 580-310468/3).

Method(s) 8270D: Surrogate recovery for the following samples were outside control limits: TP-01-SO (580-88695-2), TP-06-SO (580-88695-6), TP-07-SO (580-88695-7) and TP-08-SO (580-88695-8). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270D: Surrogate recovery for the following sample was outside control limits: TS-05-SO (580-88695-15). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270D: The following sample was diluted due to the nature of the sample matrix: TS-05-SO (580-88695-15). Elevated reporting limits (RLs) are provided.

Method(s) 8270D, 8270D SIM: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-310297 was outside criteria for the following analyte(s): N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

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Method(s) 8270D SIM: The method blank for preparation batch 580-309543 and analytical batch 580-310259 contained Benzo[a]anthracene above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and/or re-analysis of samples was not performed. Samples with detections were re-analyzed outside of holding time.

Method(s) 8270D SIM: The following analyte(s) recovered outside control limits for the LCS associated with preparation batch 580-309543 and analytical batch 580-310259: Benzo[a]pyrene. This is not indicative of a systematic control problem because these were random marginal exceedances. Qualified results have been reported.

Method(s) 8270D SIM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 580-309543 and analytical batch 580-310259 recovered outside control limits for the following analytes: Benzo[a]pyrene and Acenaphthylene.

Method(s) 8270D SIM: The method blank for preparation batch 580-309543 and analytical batch 580-310259 contained Benzo[a]anthracene above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8270D, 8270D SIM: The minimum response factor (RF) criteria for the continuing calibration verification (CCV) analyzed in batch 580-310163 was outside criteria for the following analyte(s): N-Nitrosodi-n-propylamine. As indicated in the reference method, sample analysis may proceed; however, any detection or non-detection for the affected analyte(s) is considered estimated.

Method(s) 8270D SIM: Surrogate recovery for the following samples were outside control limits: TP-01-SO (580-88695-2) and TP-07-SO (580-88695-7). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270D SIM: The following samples were diluted due to the nature of the sample matrix: TP-01-SO (580-88695-2) and TP-07-SO (580-88695-7). Elevated reporting limits (RLs) are provided.

Method(s) 8270D SIM: The following samples were diluted due to the nature of the sample matrix: TP-06-SO (580-88695-6), TP-08-SO (580-88695-8) and TS-05-SO (580-88695-15). Elevated reporting limits (RLs) are provided.

Method(s) 8270D SIM: The upper calibration point for 2,6-Dinitrotoluene on this instrument's calibration is 1000 ppb on-column. This is typically not the case but to ensure linearity of the calibration curve, removal of the higher point(s) was necessary. Therefore, any recovery in a LCS/D or MS/D above 100% (since our typical extractions target 1000 ppb on-column for 2,6-Dinitrotoluene will be off-scale high. Since %R met acceptance criteria, the data is in control and reported. .(580-88695-B-11-C MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA

Method(s) 8011: The continuing calibration verification (CCV) associated with 580-310465 recovered high and outside the control limits for Ethylene Dibromide on one column. Results are confirmed on both columns and reported from the passing column. The following samples are impacted: TP-02-SO (580-88695-3), TP-06-SO (580-88695-6), TP-08-SO (580-88695-8), TS-01-SO (580-88695-11), TS-02-SO (580-88695-12), TS-03-SO (580-88695-13), TS-04-SO (580-88695-14), TS-05-SO (580-88695-15), TS-07-SO (580-88695-16), (CCV 580-310074/1-A) and (CCV 580-310074/2-A).

Method(s) 8011: The following continuing calibration verification (CCV) standard associated with batch 580-310465 recovered outside acceptance criteria for %D for surrogate 1,2-Dibromopropane on the confirmation column only. Since all the other surrogates were within %D criteria; therefore, the data have been reported.

(CCV 580-310074/1-A) and (CCV 580-310074/2-A)

Method(s) 8011: The continuing calibration verification (CCV) associated with 580-311024 recovered high and outside the control limits for 1,2-Dibromo-3-Chloropropane, 1,2-Dibromopropane and Ethylene Dibromide on one column. Results are confirmed on both columns and reported from the passing column. The following samples are impacted: TP-04-SO (580-88695-1) and (CCV 580-310972/1-A).

Method(s) 8011: The following sample was analyzed outside of analytical holding time due being reprepared outside of holding time:

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Laboratory: Eurofins TestAmerica, Seattle (Continued)

TP-04-SO (580-88695-1).

Method(s) 8011: Surrogate recovery for the following sample was outside control limits: TP-04-SO (580-88695-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8011: Surrogate recovery for the following samples were outside control limits: TP-02-SO (580-88695-3), TP-06-SO (580-88695-6), TP-08-SO (580-88695-8), TS-02-SO (580-88695-12), TS-03-SO (580-88695-13), TS-04-SO (580-88695-14), TS-05-SO (580-88695-15) and TS-07-SO (580-88695-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8011: The following sample was analyzed outside of analytical holding time due to re-prep : TP-04-SO (580-88695-1).

Method(s) 8082A: The method blank for preparation batch 590-23989 and analytical batch 590-24016 contained PCB-1260 above the method detection limit. This target analyte concentration was less than half the reporting limit (1/2RL); therefore, re-extraction and re-analysis of samples was not performed.

Method(s) 8082A: Recovery of the surrogate Tetrachloro-m-xylene was below acceptance limits. The analytes and second surrogate were within acceptance limits and RPD for analytes was within limits as well. All samples had acceptable recoveries for Tetrachloro-m-xylene, therefore data for samples is not affected. Data will be flagged and reported. (LCSD 590-23989/3-A)

Method(s) 8082A: Surrogate recovery for the following samples were outside control limits: TP-06-SO (580-88695-6), TP-07-SO (580-88695-7) and TP-08-SO (580-88695-8). Evidence of matrix interference due to non-target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) AK102 & 103: Detected hydrocarbons in the oil range appear to be due to oil as well as biogenic interference.
TP-04-SO (580-88695-1), TP-03-SO (580-88695-4), TP-05-SO (580-88695-5), TS-01-SO (580-88695-11), TS-03-SO (580-88695-13), TS-04-SO (580-88695-14), TS-07-SO (580-88695-16), TD-01-SO (580-88695-17) and TD-07-SO (580-88695-18)

Method(s) AK102 & 103: Surrogate recovery for the following samples were outside control limits: TP-02-SO (580-88695-3), TP-06-SO (580-88695-6), TD-01-SO (580-88695-17) and TD-07-SO (580-88695-18). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) AK102 & 103: Surrogate recovery for the following sample was outside control limits: TP-07-SO (580-88695-7). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method(s) 6020A: Lead was detected in the method blank greater than the method detection limit but less than the reporting limit.

Method(s) 6020A: Arsenic was detected in the method blank greater than the method detection limit but less than the reporting limit in batches 310554 and 310658.

Method(s) 7470A: Sample TR-10-W (580-88695-23) had 45 ml available for analysis. Typical volume is 50 ml. Testing continues per SOP.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)

Definitions/Glossary

Client: Alaska Department of Env. Conservation
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Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-04-SO
Date Collected: 08/22/19 11:47
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-1
Matrix: Solid
Percent Solids: 79.0

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		7.3	0.41	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
1,1,2,2-Tetrachloroethane	ND		15	2.0	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
1,1,2-Trichloroethane	ND		7.3	0.67	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
1,1-Dichloroethene	ND *		7.3	0.90	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
1,2-Dibromoethane	ND		7.3	0.66	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
1,2-Dichloroethane	ND		7.3	0.92	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
1,4-Dichlorobenzene	ND *		7.3	0.47	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Benzene	ND *		7.3	0.61	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Bromodichloromethane	ND		7.3	0.46	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Bromoform	ND		7.3	1.6	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Bromomethane	ND		7.3	1.1	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Chloroform	ND		7.3	0.44	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
cis-1,3-Dichloropropene	ND		7.3	0.54	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Dibromochloromethane	ND		7.3	0.83	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Dibromomethane	ND		7.3	0.86	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Hexachlorobutadiene	3.3 J		7.3	0.96	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Naphthalene	3.5 J * B		7.3	1.3	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Tetrachloroethene	ND *		7.3	0.92	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
trans-1,3-Dichloropropene	ND		7.3	0.50	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Trichloroethene	ND *		7.3	0.63	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Vinyl chloride	ND		29	3.5	ug/Kg	✉	09/05/19 14:04	09/05/19 19:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		81 - 121				09/05/19 14:04	09/05/19 19:27	1
4-Bromofluorobenzene (Surr)	98		79 - 120				09/05/19 14:04	09/05/19 19:27	1
Dibromofluoromethane (Surr)	101		78 - 118				09/05/19 14:04	09/05/19 19:27	1
Toluene-d8 (Surr)	100		79 - 119				09/05/19 14:04	09/05/19 19:27	1
Trifluorotoluene (Surr)	83		52 - 152				09/05/19 14:04	09/05/19 19:27	1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	4.6 J H B		7.3	0.96	ug/Kg	✉	09/14/19 14:31	09/14/19 20:05	1
Naphthalene	11 H B		7.3	1.3	ug/Kg	✉	09/14/19 14:31	09/14/19 20:05	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		81 - 121				09/14/19 14:31	09/14/19 20:05	1
4-Bromofluorobenzene (Surr)	100		79 - 120				09/14/19 14:31	09/14/19 20:05	1
Dibromofluoromethane (Surr)	96		78 - 118				09/14/19 14:31	09/14/19 20:05	1
Toluene-d8 (Surr)	101		79 - 119				09/14/19 14:31	09/14/19 20:05	1
Trifluorotoluene (Surr)	104		52 - 152				09/14/19 14:31	09/14/19 20:05	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		58	14	ug/Kg	✉	09/04/19 12:48	09/04/19 20:09	1
1,1-Dichloroethane	ND		58	13	ug/Kg	✉	09/04/19 12:48	09/04/19 20:09	1
1,1-Dichloropropene	ND		58	7.7	ug/Kg	✉	09/04/19 12:48	09/04/19 20:09	1
1,2,3-Trichlorobenzene	ND		220	47	ug/Kg	✉	09/04/19 12:48	09/04/19 20:09	1
1,2,3-Trichloropropane	ND		58	17	ug/Kg	✉	09/04/19 12:48	09/04/19 20:09	1
1,2,4-Trichlorobenzene	ND		87	22	ug/Kg	✉	09/04/19 12:48	09/04/19 20:09	1
1,2,4-Trimethylbenzene	89		58	20	ug/Kg	✉	09/04/19 12:48	09/04/19 20:09	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-04-SO
Date Collected: 08/22/19 11:47
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-1
Matrix: Solid
Percent Solids: 79.0

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		360	22	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
1,2-Dichlorobenzene	ND		58	13	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
1,2-Dichloropropane	ND		29	9.6	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
1,3,5-Trimethylbenzene	39 J		58	11	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
1,3-Dichlorobenzene	ND		87	19	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
1,3-Dichloropropane	ND		87	20	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
2,2-Dichloropropane	ND		58	18	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
2-Butanone	ND		870	270	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
2-Chlorotoluene	ND		58	13	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
4-Chlorotoluene	ND		58	14	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
4-Isopropyltoluene	ND		58	15	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
4-Methyl-2-pentanone	ND		580	120	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Acetone	ND		1200	250	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Bromobenzene	ND		150	25	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Bromochloromethane	ND		58	9.0	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Carbon disulfide	ND		87	18	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Carbon tetrachloride	ND		29	12	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Chlorobenzene	ND		58	7.0	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Chloroethane	ND		580	15	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Chloromethane	ND		150	15	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
cis-1,2-Dichloroethene	ND		87	18	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Dichlorodifluoromethane	ND		290	67	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Ethylbenzene	ND		58	13	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Isopropylbenzene	ND		58	13	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Methyl tert-butyl ether	ND		58	8.7	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Methylene Chloride	ND		360	94	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
m-Xylene & p-Xylene	31 J		290	22	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
n-Butylbenzene	18 J		220	12	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
N-Propylbenzene	14 J		58	10	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
o-Xylene	ND		87	20	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
sec-Butylbenzene	ND		58	13	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Styrene	ND		58	8.9	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
t-Butylbenzene	ND		58	11	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Toluene	ND		220	20	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
trans-1,2-Dichloroethene	ND		87	21	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Trichlorofluoromethane	ND		290	17	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:09	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95			80 - 121			09/04/19 12:48	09/04/19 20:09	1
4-Bromofluorobenzene (Surr)	98			80 - 120			09/04/19 12:48	09/04/19 20:09	1
Dibromofluoromethane (Surr)	95			80 - 120			09/04/19 12:48	09/04/19 20:09	1
Toluene-d8 (Surr)	105			80 - 120			09/04/19 12:48	09/04/19 20:09	1
Trifluorotoluene (Surr)	73	X		80 - 120			09/04/19 12:48	09/04/19 20:09	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		11	4.6	ug/Kg	⊗	09/04/19 09:12	09/04/19 16:59	1
2,4-Dinitrophenol	ND	F1	170	34	ug/Kg	⊗	09/04/19 09:12	09/04/19 16:59	1
2,4-Dinitrotoluene	ND		22	4.4	ug/Kg	⊗	09/04/19 09:12	09/04/19 16:59	1
2,6-Dinitrotoluene	ND		11	3.5	ug/Kg	⊗	09/04/19 09:12	09/04/19 16:59	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-04-SO
Date Collected: 08/22/19 11:47
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-1
Matrix: Solid
Percent Solids: 79.0

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	ND	F2 F1	11	4.9	ug/Kg	✉	09/04/19 09:12	09/04/19 16:59	1
4-Chloroaniline	ND	F2	170	54	ug/Kg	✉	09/04/19 09:12	09/04/19 16:59	1
Bis(2-chloroethyl)ether	ND		11	3.4	ug/Kg	✉	09/04/19 09:12	09/04/19 16:59	1
Hexachlorobenzene	ND		11	4.1	ug/Kg	✉	09/04/19 09:12	09/04/19 16:59	1
Hexachlorobutadiene	ND		11	2.2	ug/Kg	✉	09/04/19 09:12	09/04/19 16:59	1
Hexachlorocyclopentadiene	ND	F1	11	3.9	ug/Kg	✉	09/04/19 09:12	09/04/19 16:59	1
Hexachloroethane	ND		11	3.4	ug/Kg	✉	09/04/19 09:12	09/04/19 16:59	1
Nitrobenzene	ND		11	3.5	ug/Kg	✉	09/04/19 09:12	09/04/19 16:59	1
N-Nitrosodimethylamine	ND		22	5.1	ug/Kg	✉	09/04/19 09:12	09/04/19 16:59	1
N-Nitrosodi-n-propylamine	ND		11	4.1	ug/Kg	✉	09/04/19 09:12	09/04/19 16:59	1
Pentachlorophenol	ND		340	100	ug/Kg	✉	09/04/19 09:12	09/04/19 16:59	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol		76		28 - 143			09/04/19 09:12	09/04/19 16:59	1
2-Fluorobiphenyl		92		42 - 140			09/04/19 09:12	09/04/19 16:59	1
Nitrobenzene-d5		86		38 - 141			09/04/19 09:12	09/04/19 16:59	1
Terphenyl-d14		99		68 - 138			09/04/19 09:12	09/04/19 16:59	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		56	6.7	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
1,2-Dichlorobenzene	ND		56	13	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
1,3-Dichlorobenzene	ND		56	5.4	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
1,4-Dichlorobenzene	ND		56	9.3	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
1-Methylnaphthalene	ND		34	5.6	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
2,4,5-Trichlorophenol	ND		220	50	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
2,4-Dichlorophenol	ND		110	17	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
2,4-Dimethylphenol	ND		110	17	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
2-Chloronaphthalene	ND		28	5.6	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
2-Chlorophenol	ND		220	15	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
2-Methylnaphthalene	ND		56	9.8	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
2-Methylphenol	ND		170	11	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
2-Nitroaniline	ND		110	17	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
2-Nitrophenol	ND		220	23	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
3 & 4 Methylphenol	ND		220	17	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
3-Nitroaniline	ND		220	45	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
4,6-Dinitro-2-methylphenol	ND		1100	110	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
4-Bromophenyl phenyl ether	ND		220	10	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
4-Chloro-3-methylphenol	ND		170	37	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
4-Chlorophenyl phenyl ether	ND		220	7.0	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
4-Nitroaniline	ND	F2	170	56	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
4-Nitrophenol	ND		1700	410	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
Acenaphthene	ND		28	5.6	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
Acenaphthylene	ND		28	5.6	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
Anthracene	ND		28	5.6	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
Benzo[a]anthracene	ND		28	5.6	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
Benzo[a]pyrene	ND		67	15	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
Benzo[b]fluoranthene	ND		28	5.6	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
Benzo[g,h,i]perylene	ND		67	10	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1
Benzo[k]fluoranthene	ND		67	16	ug/Kg	✉	09/04/19 09:12	09/06/19 19:29	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-04-SO
Date Collected: 08/22/19 11:47
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-1
Matrix: Solid
Percent Solids: 79.0

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzoic acid	ND	F1	2200	650	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Benzyl alcohol	ND		560	86	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Bis(2-chloroethoxy)methane	ND		220	20	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Bis(2-ethylhexyl) phthalate	ND		670	79	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
bis(chloroisopropyl) ether	ND		220	16	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Butyl benzyl phthalate	60	J	220	57	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Carbazole	ND	F1 *	170	9.2	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Chrysene	ND		67	15	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Dibenz(a,h)anthracene	ND		56	13	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Dibenzofuran	ND		170	6.6	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Diethyl phthalate	ND		1700	85	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Dimethyl phthalate	ND		170	15	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Di-n-butyl phthalate	ND		560	64	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Di-n-octyl phthalate	ND		170	64	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Fluoranthene	7.5	J	28	5.6	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Fluorene	ND		28	5.6	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Indeno[1,2,3-cd]pyrene	ND		45	5.6	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Isophorone	ND		170	8.3	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Naphthalene	ND		28	5.6	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
N-Nitrosodiphenylamine	ND		67	8.9	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Phenanthrene	ND		67	13	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Phenol	ND		170	26	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1
Pyrene	ND		67	7.2	ug/Kg	⊗	09/04/19 09:12	09/06/19 19:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	84		52 - 125	09/04/19 09:12	09/06/19 19:29	1
2-Fluorobiphenyl	88		57 - 120	09/04/19 09:12	09/06/19 19:29	1
2-Fluorophenol (Surr)	90		60 - 125	09/04/19 09:12	09/06/19 19:29	1
Nitrobenzene-d5 (Surr)	96		62 - 120	09/04/19 09:12	09/06/19 19:29	1
Phenol-d5 (Surr)	87		59 - 120	09/04/19 09:12	09/06/19 19:29	1
Terphenyl-d14 (Surr)	88		58 - 120	09/04/19 09:12	09/06/19 19:29	1

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND	H	0.38	0.083	ug/Kg	⊗	09/12/19 10:55	09/12/19 18:39	1
Ethylene Dibromide	ND	H	0.063	0.015	ug/Kg	⊗	09/12/19 10:55	09/12/19 18:39	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dibromo propane	50	X	60 - 140	09/12/19 10:55	09/12/19 18:39	1			

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	14		12	4.1	mg/Kg	⊗	09/03/19 11:22	09/03/19 20:26	1
Residual Range Organics (RRO) (C25-C36)	110	F1	24	6.1	mg/Kg	⊗	09/03/19 11:22	09/03/19 20:26	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
<i>o</i> -Terphenyl	79		50 - 150	09/03/19 11:22	09/03/19 20:26	1			
<i>n</i> -Triaccontane-d62	87		50 - 150	09/03/19 11:22	09/03/19 20:26	1			

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-04-SO

Date Collected: 08/22/19 11:47

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-1

Matrix: Solid

Percent Solids: 79.0

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12	B	0.23	0.047	mg/Kg	⌚	09/06/19 10:17	09/10/19 17:33	5
Barium	130	F1	0.47	0.11	mg/Kg	⌚	09/06/19 10:17	09/10/19 17:33	5
Cadmium	0.36		0.19	0.036	mg/Kg	⌚	09/06/19 10:17	09/10/19 17:33	5
Chromium	22	B	0.23	0.029	mg/Kg	⌚	09/06/19 10:17	09/10/19 17:33	5
Lead	7.5		0.23	0.022	mg/Kg	⌚	09/06/19 10:17	09/10/19 17:33	5
Selenium	0.76	B	0.51	0.13	mg/Kg	⌚	09/06/19 10:17	09/10/19 17:33	5
Silver	0.11		0.093	0.0093	mg/Kg	⌚	09/06/19 10:17	09/10/19 17:33	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12		0.030	0.0091	mg/Kg	⌚	09/09/19 10:05	09/09/19 15:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.0		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	21.0		0.1	0.1	%			08/30/19 14:26	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-01-SO
Date Collected: 08/22/19 11:27
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-2
Matrix: Solid
Percent Solids: 71.3

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		8.1	0.45	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
1,1,2,2-Tetrachloroethane	ND		16	2.2	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
1,1,2-Trichloroethane	ND		8.1	0.75	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
1,1-Dichloroethene	ND *		8.1	1.0	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
1,2-Dibromoethane	ND		8.1	0.73	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
1,2-Dichloroethane	ND		8.1	1.0	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
1,4-Dichlorobenzene	ND *		8.1	0.52	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Benzene	0.86 J*		8.1	0.68	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Bromodichloromethane	ND		8.1	0.51	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Bromoform	ND		8.1	1.8	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Bromomethane	ND		8.1	1.2	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Chloroform	ND		8.1	0.49	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
cis-1,3-Dichloropropene	ND		8.1	0.60	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Dibromochloromethane	ND		8.1	0.92	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Dibromomethane	ND		8.1	0.96	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Hexachlorobutadiene	ND		8.1	1.1	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Naphthalene	ND *		8.1	1.5	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Tetrachloroethene	ND *		8.1	1.0	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
trans-1,3-Dichloropropene	ND		8.1	0.55	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Trichloroethene	ND *		8.1	0.70	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Vinyl chloride	ND		32	3.8	ug/Kg	⊗	09/05/19 14:04	09/05/19 19:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	109		81 - 121				09/05/19 14:04	09/05/19 19:53	1
4-Bromofluorobenzene (Surr)	94		79 - 120				09/05/19 14:04	09/05/19 19:53	1
Dibromofluoromethane (Surr)	103		78 - 118				09/05/19 14:04	09/05/19 19:53	1
Toluene-d8 (Surr)	99		79 - 119				09/05/19 14:04	09/05/19 19:53	1
Trifluorotoluene (Surr)	73		52 - 152				09/05/19 14:04	09/05/19 19:53	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		65	16	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,1-Dichloroethane	ND		65	15	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,1-Dichloropropene	ND		65	8.6	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,2,3-Trichlorobenzene	ND		240	52	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,2,3-Trichloropropane	ND		65	19	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,2,4-Trichlorobenzene	ND		97	25	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,2,4-Trimethylbenzene	ND		65	22	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,2-Dibromo-3-Chloropropane	ND		400	25	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,2-Dichlorobenzene	ND		65	14	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,2-Dichloropropane	ND		32	11	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,3,5-Trimethylbenzene	ND		65	12	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,3-Dichlorobenzene	ND		97	22	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
1,3-Dichloropropane	ND		97	22	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
2,2-Dichloropropane	ND		65	20	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
2-Butanone	ND		970	300	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
2-Chlorotoluene	ND		65	14	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
4-Chlorotoluene	ND		65	16	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
4-Isopropyltoluene	ND		65	17	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1
4-Methyl-2-pentanone	ND		650	130	ug/Kg	⊗	09/04/19 12:48	09/04/19 20:35	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-01-SO
Date Collected: 08/22/19 11:27
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-2
Matrix: Solid
Percent Solids: 71.3

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		1300	280	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Bromobenzene	ND		160	28	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Bromoform	ND		65	10	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Carbon disulfide	ND		97	20	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Carbon tetrachloride	ND		32	13	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Chlorobenzene	ND		65	7.8	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Chloroethane	ND		650	16	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Chloromethane	ND		160	16	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
cis-1,2-Dichloroethene	ND		97	20	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Dichlorodifluoromethane	ND		320	74	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Ethylbenzene	ND		65	15	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Isopropylbenzene	ND		65	14	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Methyl tert-butyl ether	ND		65	9.7	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Methylene Chloride	ND		400	100	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
m-Xylene & p-Xylene	34 J		320	24	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
n-Butylbenzene	ND		240	13	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
N-Propylbenzene	ND		65	11	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
o-Xylene	ND		97	22	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
sec-Butylbenzene	ND		65	14	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Styrene	ND		65	9.9	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
t-Butylbenzene	ND		65	12	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Toluene	ND		240	22	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
trans-1,2-Dichloroethene	ND		97	24	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Trichlorofluoromethane	ND		320	18	ug/Kg	✉	09/04/19 12:48	09/04/19 20:35	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97			80 - 121			09/04/19 12:48	09/04/19 20:35	1
4-Bromofluorobenzene (Surr)	114			80 - 120			09/04/19 12:48	09/04/19 20:35	1
Dibromofluoromethane (Surr)	100			80 - 120			09/04/19 12:48	09/04/19 20:35	1
Toluene-d8 (Surr)	105			80 - 120			09/04/19 12:48	09/04/19 20:35	1
Trifluorotoluene (Surr)	62 X			80 - 120			09/04/19 12:48	09/04/19 20:35	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		270	110	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
2,4-Dinitrophenol	ND		4000	800	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
2,4-Dinitrotoluene	ND		530	110	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
2,6-Dinitrotoluene	ND		270	83	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
3,3'-Dichlorobenzidine	ND		270	120	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
4-Chloroaniline	ND		4000	1300	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
Bis(2-chloroethyl)ether	ND		270	82	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
Hexachlorobenzene	ND		270	98	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
Hexachlorobutadiene	ND		270	52	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
Hexachlorocyclopentadiene	ND		270	93	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
Hexachloroethane	ND		270	81	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
Nitrobenzene	ND		270	83	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
N-Nitrosodimethylamine	ND		530	120	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
N-Nitrosodi-n-propylamine	ND		270	98	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20
Pentachlorophenol	ND		8000	2400	ug/Kg	✉	09/04/19 09:12	09/05/19 13:36	20

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-01-SO

Date Collected: 08/22/19 11:27

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-2

Matrix: Solid

Percent Solids: 71.3

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	117		28 - 143	09/04/19 09:12	09/05/19 13:36	20
2-Fluorobiphenyl	85		42 - 140	09/04/19 09:12	09/05/19 13:36	20
Nitrobenzene-d5	442 X		38 - 141	09/04/19 09:12	09/05/19 13:36	20
Terphenyl-d14	88		68 - 138	09/04/19 09:12	09/05/19 13:36	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1700	200	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
1,2-Dichlorobenzene	ND		1700	400	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
1,3-Dichlorobenzene	ND		1700	160	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
1,4-Dichlorobenzene	ND		1700	280	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
1-Methylnaphthalene	ND		1000	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
2,4,5-Trichlorophenol	ND		6700	1500	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
2,4-Dichlorophenol	ND		3300	500	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
2,4-Dimethylphenol	ND		3300	500	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
2-Chloronaphthalene	ND		840	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
2-Chlorophenol	ND		6700	430	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
2-Methylnaphthalene	ND		1700	290	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
2-Methylphenol	ND		5000	330	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
2-Nitroaniline	ND		3300	500	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
2-Nitrophenol	ND		6700	700	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
3 & 4 Methylphenol	ND		6700	500	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
3-Nitroaniline	ND		6700	1300	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
4,6-Dinitro-2-methylphenol	ND		33000	3300	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
4-Bromophenyl phenyl ether	ND		6700	300	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
4-Chloro-3-methylphenol	ND		5000	1100	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
4-Chlorophenyl phenyl ether	ND		6700	210	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
4-Nitroaniline	ND		5000	1700	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
4-Nitrophenol	ND		50000	12000	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Acenaphthene	ND		840	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Acenaphthylene	ND		840	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Anthracene	ND		840	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Benzo[a]anthracene	ND		840	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Benzo[a]pyrene	ND		2000	430	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Benzo[b]fluoranthene	ND		840	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Benzo[g,h,i]perylene	ND		2000	300	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Benzo[k]fluoranthene	ND		2000	470	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Benzoic acid	ND		67000	19000	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Benzyl alcohol	ND		17000	2600	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Bis(2-chloroethoxy)methane	ND		6700	600	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Bis(2-ethylhexyl) phthalate	ND		20000	2400	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
bis(chloroisopropyl) ether	ND		6700	470	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Butyl benzyl phthalate	ND		6700	1700	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Carbazole	ND *		5000	270	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Chrysene	ND		2000	430	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Dibenz(a,h)anthracene	ND		1700	400	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Dibenzofuran	ND		5000	200	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Diethyl phthalate	ND		50000	2500	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Dimethyl phthalate	ND		5000	430	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Di-n-butyl phthalate	ND		17000	1900	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-01-SO
Date Collected: 08/22/19 11:27
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-2
Matrix: Solid
Percent Solids: 71.3

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		5000	1900	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Fluoranthene	ND		840	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Fluorene	ND		840	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Indeno[1,2,3-cd]pyrene	ND		1300	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Isophorone	ND		5000	250	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Naphthalene	ND		840	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
N-Nitrosodiphenylamine	ND		2000	270	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Phenanthrene	ND		2000	400	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Phenol	ND		5000	770	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Pyrene	ND		2000	210	ug/Kg	⊗	09/04/19 09:12	09/06/19 20:40	25
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	218	X		52 - 125			09/04/19 09:12	09/06/19 20:40	25
2-Fluorobiphenyl	58			57 - 120			09/04/19 09:12	09/06/19 20:40	25
2-Fluorophenol (Surr)	85			60 - 125			09/04/19 09:12	09/06/19 20:40	25
Nitrobenzene-d5 (Surr)	596	X		62 - 120			09/04/19 09:12	09/06/19 20:40	25
Phenol-d5 (Surr)	22	X		59 - 120			09/04/19 09:12	09/06/19 20:40	25
Terphenyl-d14 (Surr)	92			58 - 120			09/04/19 09:12	09/06/19 20:40	25

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	14000		140	47	mg/Kg	⊗	09/03/19 11:22	09/03/19 21:25	10
Residual Range Organics (RRO) (C25-C36)	270	J	280	70	mg/Kg	⊗	09/03/19 11:22	09/03/19 21:25	10
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	82			50 - 150			09/03/19 11:22	09/03/19 21:25	10
<i>n</i> -Triaccontane-d62	87			50 - 150			09/03/19 11:22	09/03/19 21:25	10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	4.4	B	0.27	0.053	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:21	5
Barium	170		0.53	0.12	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:21	5
Cadmium	0.42		0.21	0.041	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:21	5
Chromium	28	B	0.27	0.033	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:21	5
Lead	9.7		0.27	0.026	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:21	5
Selenium	1.0	B	0.58	0.15	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:21	5
Silver	0.18		0.11	0.011	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:21	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	71.3		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	28.7		0.1	0.1	%			08/30/19 14:26	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-02-SO
Date Collected: 08/22/19 11:40
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-3
Matrix: Solid
Percent Solids: 70.9

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		13	5.5	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
2,4-Dinitrophenol	ND		200	40	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
2,4-Dinitrotoluene	ND		27	5.3	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
2,6-Dinitrotoluene	ND		13	4.2	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
3,3'-Dichlorobenzidine	ND		13	5.8	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
4-Chloroaniline	ND		200	64	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
Bis(2-chloroethyl)ether	ND		13	4.1	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
Hexachlorobenzene	ND		13	4.9	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
Hexachlorobutadiene	ND		13	2.6	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
Hexachlorocyclopentadiene	ND		13	4.7	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
Hexachloroethane	ND		13	4.0	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
Nitrobenzene	ND		13	4.2	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
N-Nitrosodimethylamine	ND		27	6.2	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
N-Nitrosodi-n-propylamine	ND		13	4.9	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
Pentachlorophenol	130 J		400	120	ug/Kg	⊗	09/04/19 09:12	09/04/19 18:31	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	85		28 - 143				09/04/19 09:12	09/04/19 18:31	1
2-Fluorobiphenyl	64		42 - 140				09/04/19 09:12	09/04/19 18:31	1
Nitrobenzene-d5	94		38 - 141				09/04/19 09:12	09/04/19 18:31	1
Terphenyl-d14	107		68 - 138				09/04/19 09:12	09/04/19 18:31	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		670	80	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
1,2-Dichlorobenzene	ND		670	160	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
1,3-Dichlorobenzene	ND		670	64	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
1,4-Dichlorobenzene	ND		670	110	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
1-Methylnaphthalene	ND		400	67	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
2,4,5-Trichlorophenol	ND		2700	600	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
2,4-Dichlorophenol	ND		1300	200	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
2,4-Dimethylphenol	ND		1300	200	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
2-Chloronaphthalene	ND		330	67	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
2-Chlorophenol	ND		2700	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
2-Methylnaphthalene	ND		670	120	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
2-Methylphenol	ND		2000	130	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
2-Nitroaniline	ND		1300	200	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
2-Nitrophenol	ND		2700	280	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
3 & 4 Methylphenol	ND		2700	200	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
3-Nitroaniline	ND		2700	540	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
4,6-Dinitro-2-methylphenol	ND		13000	1300	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
4-Bromophenyl phenyl ether	ND		2700	120	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
4-Chloro-3-methylphenol	ND		2000	440	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
4-Chlorophenyl phenyl ether	ND		2700	84	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
4-Nitroaniline	ND		2000	670	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
4-Nitrophenol	ND		20000	4900	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Acenaphthene	ND		330	67	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Acenaphthylene	ND		330	67	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Anthracene	ND		330	67	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Benzo[a]anthracene	ND		330	67	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-02-SO
Date Collected: 08/22/19 11:40
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-3
Matrix: Solid
Percent Solids: 70.9

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		800	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Benzo[b]fluoranthene	ND		330	67	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Benzo[g,h,i]perylene	ND		800	120	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Benzo[k]fluoranthene	ND		800	190	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Benzoic acid	ND		27000	7800	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Benzyl alcohol	ND		6700	1000	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Bis(2-chloroethoxy)methane	ND		2700	240	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Bis(2-ethylhexyl) phthalate	4900	J		950	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
bis(chloroisopropyl) ether	ND		2700	190	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Butyl benzyl phthalate	ND		2700	680	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Carbazole	ND *		2000	110	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Chrysene	ND		800	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Dibenz(a,h)anthracene	ND		670	160	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Dibenzofuran	ND		2000	79	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Diethyl phthalate	ND		20000	1000	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Dimethyl phthalate	ND		2000	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Di-n-butyl phthalate	ND		6700	760	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Di-n-octyl phthalate	ND		2000	760	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Fluoranthene	ND		330	67	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Fluorene	ND		330	67	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Indeno[1,2,3-cd]pyrene	ND		540	67	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Isophorone	ND		2000	99	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Naphthalene	ND		330	67	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
N-Nitrosodiphenylamine	ND		800	110	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Phenanthrene	ND		800	160	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Phenol	ND		2000	310	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Pyrene	ND		800	86	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:04	10
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surrogate)	122			52 - 125			09/04/19 09:12	09/06/19 21:04	10
2-Fluorobiphenyl	98			57 - 120			09/04/19 09:12	09/06/19 21:04	10
2-Fluorophenol (Surrogate)	86			60 - 125			09/04/19 09:12	09/06/19 21:04	10
Nitrobenzene-d5 (Surrogate)	119			62 - 120			09/04/19 09:12	09/06/19 21:04	10
Phenol-d5 (Surrogate)	90			59 - 120			09/04/19 09:12	09/06/19 21:04	10
Terphenyl-d14 (Surrogate)	114			58 - 120			09/04/19 09:12	09/06/19 21:04	10

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.38	0.085	ug/Kg	⊗	09/03/19 16:43	09/06/19 20:16	1
Ethylene Dibromide	ND		0.064	0.015	ug/Kg	⊗	09/03/19 16:43	09/06/19 20:16	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	12	X		60 - 140			09/03/19 16:43	09/06/19 20:16	1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	6200		140	47	mg/Kg	⊗	09/03/19 11:22	09/03/19 21:44	10
Residual Range Organics (RRO) (C25-C36)	38000		280	69	mg/Kg	⊗	09/03/19 11:22	09/03/19 21:44	10

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-02-SO

Date Collected: 08/22/19 11:40

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-3

Matrix: Solid

Percent Solids: 70.9

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	84		50 - 150	09/03/19 11:22	09/03/19 21:44	10
<i>n</i> -Triaccontane-d62	238	X	50 - 150	09/03/19 11:22	09/03/19 21:44	10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	20	B	0.26	0.051	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:25	5
Barium	180		0.51	0.12	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:25	5
Cadmium	0.59		0.20	0.039	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:25	5
Chromium	26	B	0.26	0.032	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:25	5
Lead	15		0.26	0.025	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:25	5
Selenium	1.1	B	0.56	0.15	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:25	5
Silver	0.15		0.10	0.010	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:25	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	70.9		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	29.1		0.1	0.1	%			08/30/19 14:26	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-03-SO

Date Collected: 08/22/19 11:43

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-4

Matrix: Solid

Percent Solids: 74.4

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		13	5.4	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
2,4-Dinitrophenol	ND		200	39	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
2,4-Dinitrotoluene	ND		26	5.1	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
2,6-Dinitrotoluene	ND		13	4.0	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
3,3'-Dichlorobenzidine	ND		13	5.7	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
4-Chloroaniline	ND		200	63	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
Bis(2-chloroethyl)ether	ND		13	4.0	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
Hexachlorobenzene	ND		13	4.8	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
Hexachlorobutadiene	ND		13	2.5	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
Hexachlorocyclopentadiene	ND		13	4.5	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
Hexachloroethane	ND		13	3.9	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
Nitrobenzene	ND		13	4.0	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
N-Nitrosodimethylamine	ND		26	6.0	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
N-Nitrosodi-n-propylamine	ND		13	4.8	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
Pentachlorophenol	ND		390	120	ug/Kg	✉	09/04/19 09:12	09/04/19 18:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	82		28 - 143				09/04/19 09:12	09/04/19 18:54	1
2-Fluorobiphenyl	98		42 - 140				09/04/19 09:12	09/04/19 18:54	1
Nitrobenzene-d5	94		38 - 141				09/04/19 09:12	09/04/19 18:54	1
Terphenyl-d14	110		68 - 138				09/04/19 09:12	09/04/19 18:54	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		65	7.8	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
1,2-Dichlorobenzene	ND		65	16	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
1,3-Dichlorobenzene	ND		65	6.2	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
1,4-Dichlorobenzene	ND		65	11	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
1-Methylnaphthalene	ND		39	6.5	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
2,4,5-Trichlorophenol	ND		260	59	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
2,4-Dichlorophenol	ND		130	20	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
2,4-Dimethylphenol	ND		130	20	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
2-Chloronaphthalene	ND		33	6.5	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
2-Chlorophenol	ND		260	17	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
2-Methylnaphthalene	ND		65	11	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
2-Methylphenol	ND		200	13	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
2-Nitroaniline	ND		130	20	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
2-Nitrophenol	ND		260	27	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
3 & 4 Methylphenol	ND		260	20	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
3-Nitroaniline	ND		260	52	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
4,6-Dinitro-2-methylphenol	ND		1300	130	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
4-Bromophenyl phenyl ether	ND		260	12	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
4-Chloro-3-methylphenol	ND		200	43	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
4-Chlorophenyl phenyl ether	ND		260	8.2	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
4-Nitroaniline	ND		200	65	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
4-Nitrophenol	ND		2000	480	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
Acenaphthene	ND		33	6.5	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
Acenaphthylene	ND		33	6.5	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
Anthracene	ND		33	6.5	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1
Benzo[a]anthracene	ND		33	6.5	ug/Kg	✉	09/04/19 09:12	09/06/19 21:28	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-03-SO
Date Collected: 08/22/19 11:43
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-4
Matrix: Solid
Percent Solids: 74.4

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		78	17	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Benzo[b]fluoranthene	ND		33	6.5	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Benzo[g,h,i]perylene	ND		78	12	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Benzo[k]fluoranthene	ND		78	18	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Benzoic acid	ND		2600	750	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Benzyl alcohol	ND		650	100	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Bis(2-chloroethoxy)methane	ND		260	23	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Bis(2-ethylhexyl) phthalate	110 J		780	92	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
bis(chloroisopropyl) ether	ND		260	18	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Butyl benzyl phthalate	95 J		260	66	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Carbazole	ND *		200	11	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Chrysene	ND		78	17	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Dibenz(a,h)anthracene	ND		65	16	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Dibenzofuran	ND		200	7.7	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Diethyl phthalate	ND		2000	99	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Dimethyl phthalate	ND		200	17	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Di-n-butyl phthalate	ND		650	74	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Di-n-octyl phthalate	ND		200	74	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Fluoranthene	ND		33	6.5	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Fluorene	ND		33	6.5	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Indeno[1,2,3-cd]pyrene	ND		52	6.5	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Isophorone	ND		200	9.6	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Naphthalene	ND		33	6.5	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
N-Nitrosodiphenylamine	ND		78	10	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Phenanthrene	ND		78	16	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Phenol	ND		200	30	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Pyrene	ND		78	8.3	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:28	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	86			52 - 125			09/04/19 09:12	09/06/19 21:28	1
2-Fluorobiphenyl	90			57 - 120			09/04/19 09:12	09/06/19 21:28	1
2-Fluorophenol (Surr)	92			60 - 125			09/04/19 09:12	09/06/19 21:28	1
Nitrobenzene-d5 (Surr)	107			62 - 120			09/04/19 09:12	09/06/19 21:28	1
Phenol-d5 (Surr)	88			59 - 120			09/04/19 09:12	09/06/19 21:28	1
Terphenyl-d14 (Surr)	91			58 - 120			09/04/19 09:12	09/06/19 21:28	1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	39		13	4.5	mg/Kg	⊗	09/03/19 11:22	09/03/19 22:23	1
Residual Range Organics (RRO) (C25-C36)	370		26	6.6	mg/Kg	⊗	09/03/19 11:22	09/03/19 22:23	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	83			50 - 150			09/03/19 11:22	09/03/19 22:23	1
<i>n</i> -Triacontane-d62	99			50 - 150			09/03/19 11:22	09/03/19 22:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	74.4		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	25.6		0.1	0.1	%			08/30/19 14:26	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-05-SO
Date Collected: 08/22/19 11:54
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-5
Matrix: Solid
Percent Solids: 79.5

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		12	4.9	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
2,4-Dinitrophenol	ND		180	36	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
2,4-Dinitrotoluene	ND		24	4.7	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
2,6-Dinitrotoluene	ND		12	3.7	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
3,3'-Dichlorobenzidine	ND		12	5.2	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
4-Chloroaniline	ND		180	57	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
Bis(2-chloroethyl)ether	ND		12	3.7	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
Hexachlorobenzene	ND		12	4.4	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
Hexachlorobutadiene	ND		12	2.3	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
Hexachlorocyclopentadiene	ND		12	4.2	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
Hexachloroethane	ND		12	3.6	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
Nitrobenzene	ND		12	3.7	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
N-Nitrosodimethylamine	ND		24	5.5	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
N-Nitrosodi-n-propylamine	ND		12	4.4	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
Pentachlorophenol	ND		360	110	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:17	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	77		28 - 143				09/04/19 09:12	09/04/19 19:17	1
2-Fluorobiphenyl	93		42 - 140				09/04/19 09:12	09/04/19 19:17	1
Nitrobenzene-d5	91		38 - 141				09/04/19 09:12	09/04/19 19:17	1
Terphenyl-d14	93		68 - 138				09/04/19 09:12	09/04/19 19:17	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		60	7.2	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
1,2-Dichlorobenzene	ND		60	14	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
1,3-Dichlorobenzene	ND		60	5.7	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
1,4-Dichlorobenzene	ND		60	9.9	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
1-Methylnaphthalene	ND		36	6.0	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
2,4,5-Trichlorophenol	ND		240	54	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
2,4-Dichlorophenol	ND		120	18	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
2,4-Dimethylphenol	ND		120	18	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
2-Chloronaphthalene	ND		30	6.0	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
2-Chlorophenol	ND		240	16	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
2-Methylnaphthalene	ND		60	11	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
2-Methylphenol	ND		180	12	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
2-Nitroaniline	ND		120	18	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
2-Nitrophenol	ND		240	25	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
3 & 4 Methylphenol	ND		240	18	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
3-Nitroaniline	ND		240	48	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
4,6-Dinitro-2-methylphenol	ND		1200	120	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
4-Bromophenyl phenyl ether	ND		240	11	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
4-Chloro-3-methylphenol	ND		180	39	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
4-Chlorophenyl phenyl ether	ND		240	7.5	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
4-Nitroaniline	ND		180	60	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
4-Nitrophenol	ND		1800	440	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Acenaphthene	ND		30	6.0	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Acenaphthylene	ND		30	6.0	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Anthracene	ND		30	6.0	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Benzo[a]anthracene	ND		30	6.0	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-05-SO
Date Collected: 08/22/19 11:54
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-5
Matrix: Solid
Percent Solids: 79.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]pyrene	ND		72	16	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Benzo[b]fluoranthene	ND		30	6.0	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Benzo[g,h,i]perylene	ND		72	11	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Benzo[k]fluoranthene	ND		72	17	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Benzoic acid	ND		2400	690	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Benzyl alcohol	ND		600	92	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Bis(2-chloroethoxy)methane	ND		240	22	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Bis(2-ethylhexyl) phthalate	ND		720	85	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
bis(chloroisopropyl) ether	ND		240	17	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Butyl benzyl phthalate	80	J	240	61	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Carbazole	ND *		180	9.8	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Chrysene	ND		72	16	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Dibenz(a,h)anthracene	ND		60	14	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Dibenzofuran	ND		180	7.1	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Diethyl phthalate	ND		1800	91	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Dimethyl phthalate	ND		180	16	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Di-n-butyl phthalate	ND		600	68	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Di-n-octyl phthalate	ND		180	68	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Fluoranthene	ND		30	6.0	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Fluorene	ND		30	6.0	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Indeno[1,2,3-cd]pyrene	ND		48	6.0	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Isophorone	ND		180	8.8	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Naphthalene	ND		30	6.0	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
N-Nitrosodiphenylamine	ND		72	9.6	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Phenanthrene	ND		72	14	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Phenol	ND		180	27	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Pyrene	ND		72	7.6	ug/Kg	⊗	09/04/19 09:12	09/06/19 21:52	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	89			52 - 125			09/04/19 09:12	09/06/19 21:52	1
2-Fluorobiphenyl	84			57 - 120			09/04/19 09:12	09/06/19 21:52	1
2-Fluorophenol (Surr)	98			60 - 125			09/04/19 09:12	09/06/19 21:52	1
Nitrobenzene-d5 (Surr)	104			62 - 120			09/04/19 09:12	09/06/19 21:52	1
Phenol-d5 (Surr)	91			59 - 120			09/04/19 09:12	09/06/19 21:52	1
Terphenyl-d14 (Surr)	97			58 - 120			09/04/19 09:12	09/06/19 21:52	1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	14		12	4.1	mg/Kg	⊗	09/03/19 11:22	09/03/19 22:43	1
Residual Range Organics (RRO) (C25-C36)	110		24	6.0	mg/Kg	⊗	09/03/19 11:22	09/03/19 22:43	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	89			50 - 150			09/03/19 11:22	09/03/19 22:43	1
<i>n</i> -Triacontane-d62	97			50 - 150			09/03/19 11:22	09/03/19 22:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.5		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	20.5		0.1	0.1	%			08/30/19 14:26	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-06-SO
Date Collected: 08/22/19 12:03
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-6
Matrix: Solid
Percent Solids: 79.2

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		7.4	0.42	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
1,1,2,2-Tetrachloroethane	ND		15	2.0	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
1,1,2-Trichloroethane	ND		7.4	0.68	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
1,1-Dichloroethene	ND *		7.4	0.92	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
1,2-Dibromoethane	ND		7.4	0.67	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
1,2-Dichloroethane	ND		7.4	0.94	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
1,4-Dichlorobenzene	ND *		7.4	0.48	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Benzene	ND *		7.4	0.63	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Bromodichloromethane	ND		7.4	0.47	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Bromoform	ND		7.4	1.7	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Bromomethane	ND		7.4	1.1	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Chloroform	ND		7.4	0.45	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
cis-1,3-Dichloropropene	ND		7.4	0.55	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Dibromochloromethane	ND		7.4	0.85	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Dibromomethane	ND		7.4	0.88	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Hexachlorobutadiene	ND		7.4	0.98	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Naphthalene	9.4 * B		7.4	1.4	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Tetrachloroethene	ND *		7.4	0.94	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
trans-1,3-Dichloropropene	ND		7.4	0.51	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Trichloroethene	ND *		7.4	0.64	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1
Vinyl chloride	ND		30	3.5	ug/Kg	✉	09/05/19 14:04	09/05/19 20:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	65	X	81 - 121	09/05/19 14:04	09/05/19 20:19	1
4-Bromofluorobenzene (Surr)	90		79 - 120	09/05/19 14:04	09/05/19 20:19	1
Dibromofluoromethane (Surr)	79		78 - 118	09/05/19 14:04	09/05/19 20:19	1
Toluene-d8 (Surr)	107		79 - 119	09/05/19 14:04	09/05/19 20:19	1
Trifluorotoluene (Surr)	91		52 - 152	09/05/19 14:04	09/05/19 20:19	1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	36 H B		7.4	1.4	ug/Kg	✉	09/14/19 14:31	09/14/19 20:31	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	83		81 - 121	09/14/19 14:31	09/14/19 20:31	1			
4-Bromofluorobenzene (Surr)	104		79 - 120	09/14/19 14:31	09/14/19 20:31	1			
Dibromofluoromethane (Surr)	89		78 - 118	09/14/19 14:31	09/14/19 20:31	1			
Toluene-d8 (Surr)	115		79 - 119	09/14/19 14:31	09/14/19 20:31	1			
Trifluorotoluene (Surr)	85		52 - 152	09/14/19 14:31	09/14/19 20:31	1			

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		60	14	ug/Kg	✉	09/04/19 12:48	09/04/19 21:00	1
1,1-Dichloroethane	ND		60	14	ug/Kg	✉	09/04/19 12:48	09/04/19 21:00	1
1,1-Dichloropropene	ND		60	7.9	ug/Kg	✉	09/04/19 12:48	09/04/19 21:00	1
1,2,3-Trichlorobenzene	ND		220	48	ug/Kg	✉	09/04/19 12:48	09/04/19 21:00	1
1,2,3-Trichloropropane	ND		60	17	ug/Kg	✉	09/04/19 12:48	09/04/19 21:00	1
1,2,4-Trichlorobenzene	ND		89	23	ug/Kg	✉	09/04/19 12:48	09/04/19 21:00	1
1,2,4-Trimethylbenzene	23 J		60	20	ug/Kg	✉	09/04/19 12:48	09/04/19 21:00	1
1,2-Dibromo-3-Chloropropane	ND		370	23	ug/Kg	✉	09/04/19 12:48	09/04/19 21:00	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-06-SO
Date Collected: 08/22/19 12:03
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-6
Matrix: Solid
Percent Solids: 79.2

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,2-Dichlorobenzene	ND		60	13	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
1,2-Dichloropropane	ND		30	9.8	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
1,3,5-Trimethylbenzene	ND		60	11	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
1,3-Dichlorobenzene	ND		89	20	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
1,3-Dichloropropane	ND		89	21	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
2,2-Dichloropropane	ND		60	18	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
2-Butanone	ND		890	280	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
2-Chlorotoluene	ND		60	13	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
4-Chlorotoluene	ND		60	15	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
4-Isopropyltoluene	ND		60	15	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
4-Methyl-2-pentanone	ND		600	120	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Acetone	ND		1200	260	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Bromobenzene	ND		150	25	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Bromochloromethane	ND		60	9.2	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Carbon disulfide	ND		89	18	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Carbon tetrachloride	ND		30	12	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Chlorobenzene	ND		60	7.1	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Chloroethane	ND		600	15	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Chloromethane	ND		150	15	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
cis-1,2-Dichloroethene	ND		89	19	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Dichlorodifluoromethane	ND		300	68	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Ethylbenzene	ND		60	14	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Isopropylbenzene	ND		60	13	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Methyl tert-butyl ether	39	J		60	8.9	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1
Methylene Chloride	ND		370	96	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
m-Xylene & p-Xylene	ND		300	22	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
n-Butylbenzene	ND		220	12	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
N-Propylbenzene	ND		60	10	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
o-Xylene	ND		89	20	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
sec-Butylbenzene	ND		60	13	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Styrene	ND		60	9.1	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
t-Butylbenzene	ND		60	11	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Toluene	ND		220	20	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
trans-1,2-Dichloroethene	ND		89	22	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	
Trichlorofluoromethane	ND		300	17	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:00	1	

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		80 - 121	09/04/19 12:48	09/04/19 21:00	1
4-Bromofluorobenzene (Surr)	99		80 - 120	09/04/19 12:48	09/04/19 21:00	1
Dibromofluoromethane (Surr)	92		80 - 120	09/04/19 12:48	09/04/19 21:00	1
Toluene-d8 (Surr)	105		80 - 120	09/04/19 12:48	09/04/19 21:00	1
Trifluorotoluene (Surr)	60	X	80 - 120	09/04/19 12:48	09/04/19 21:00	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		59	24	ug/Kg	⌚	09/04/19 09:12	09/04/19 19:40	5
2,4-Dinitrophenol	ND		890	180	ug/Kg	⌚	09/04/19 09:12	09/04/19 19:40	5
2,4-Dinitrotoluene	ND		120	23	ug/Kg	⌚	09/04/19 09:12	09/04/19 19:40	5
2,6-Dinitrotoluene	1200		59	18	ug/Kg	⌚	09/04/19 09:12	09/04/19 19:40	5
3,3'-Dichlorobenzidine	ND		59	26	ug/Kg	⌚	09/04/19 09:12	09/04/19 19:40	5

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-06-SO
Date Collected: 08/22/19 12:03
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-6
Matrix: Solid
Percent Solids: 79.2

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	ND		890	280	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:40	5
Bis(2-chloroethyl)ether	ND		59	18	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:40	5
Hexachlorobenzene	520		59	22	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:40	5
Hexachlorobutadiene	ND		59	12	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:40	5
Hexachlorocyclopentadiene	ND		59	21	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:40	5
Hexachloroethane	ND		59	18	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:40	5
Nitrobenzene	ND		59	18	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:40	5
N-Nitrosodimethylamine	ND		120	27	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:40	5
N-Nitrosodi-n-propylamine	ND		59	22	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:40	5
Pentachlorophenol	3000		1800	540	ug/Kg	⊗	09/04/19 09:12	09/04/19 19:40	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	86		28 - 143				09/04/19 09:12	09/04/19 19:40	5
2-Fluorobiphenyl	73		42 - 140				09/04/19 09:12	09/04/19 19:40	5
Nitrobenzene-d5	90		38 - 141				09/04/19 09:12	09/04/19 19:40	5
Terphenyl-d14	97		68 - 138				09/04/19 09:12	09/04/19 19:40	5

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		590	71	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
1,2-Dichlorobenzene	ND		590	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
1,3-Dichlorobenzene	ND		590	57	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
1,4-Dichlorobenzene	ND		590	98	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
1-Methylnaphthalene	ND		350	59	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
2,4,5-Trichlorophenol	ND		2400	530	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
2,4-Dichlorophenol	ND		1200	180	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
2,4-Dimethylphenol	ND		1200	180	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
2-Chloronaphthalene	ND		300	59	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
2-Chlorophenol	ND		2400	150	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
2-Methylnaphthalene	ND		590	100	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
2-Methylphenol	ND		1800	120	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
2-Nitroaniline	ND		1200	180	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
2-Nitrophenol	ND		2400	250	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
3 & 4 Methylphenol	ND		2400	180	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
3-Nitroaniline	ND		2400	470	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
4,6-Dinitro-2-methylphenol	ND		12000	1200	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
4-Bromophenyl phenyl ether	ND		2400	110	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
4-Chloro-3-methylphenol	ND		1800	390	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
4-Chlorophenyl phenyl ether	ND		2400	75	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
4-Nitroaniline	ND		1800	590	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
4-Nitrophenol	ND		18000	4400	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
Acenaphthene	ND		300	59	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
Acenaphthylene	ND		300	59	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
Anthracene	ND		300	59	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
Benzo[a]anthracene	ND		300	59	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
Benzo[a]pyrene	ND		710	150	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
Benzo[b]fluoranthene	ND		300	59	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
Benzo[g,h,i]perylene	ND		710	110	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
Benzo[k]fluoranthene	ND		710	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10
Benzoic acid	ND		24000	6800	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:15	10

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-06-SO
Date Collected: 08/22/19 12:03
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-6
Matrix: Solid
Percent Solids: 79.2

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	ND		5900	910	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Bis(2-chloroethoxy)methane	ND		2400	210	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Bis(2-ethylhexyl) phthalate	ND		7100	840	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
bis(chloroisopropyl) ether	ND		2400	170	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Butyl benzyl phthalate	ND		2400	600	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Carbazole	ND *		1800	97	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Chrysene	ND		710	150	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Dibenz(a,h)anthracene	ND		590	140	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Dibenzofuran	ND		1800	70	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Diethyl phthalate	ND		18000	900	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Dimethyl phthalate	ND		1800	150	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Di-n-butyl phthalate	ND		5900	670	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Di-n-octyl phthalate	ND		1800	670	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Fluoranthene	ND		300	59	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Fluorene	ND		300	59	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Indeno[1,2,3-cd]pyrene	ND		470	59	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Isophorone	ND		1800	88	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Naphthalene	ND		300	59	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
N-Nitrosodiphenylamine	ND		710	95	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Phenanthrene	ND		710	140	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Phenol	ND		1800	270	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Pyrene	300 J		710	76	ug/Kg	✉	09/04/19 09:12	09/06/19 22:15	10
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	128	X		52 - 125			09/04/19 09:12	09/06/19 22:15	10
2-Fluorobiphenyl	83			57 - 120			09/04/19 09:12	09/06/19 22:15	10
2-Fluorophenol (Surr)	79			60 - 125			09/04/19 09:12	09/06/19 22:15	10
Nitrobenzene-d5 (Surr)	101			62 - 120			09/04/19 09:12	09/06/19 22:15	10
Phenol-d5 (Surr)	81			59 - 120			09/04/19 09:12	09/06/19 22:15	10
Terphenyl-d14 (Surr)	95			58 - 120			09/04/19 09:12	09/06/19 22:15	10

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.32	0.070	ug/Kg	✉	09/03/19 16:43	09/06/19 20:32	1
Ethylene Dibromide	ND		0.053	0.013	ug/Kg	✉	09/03/19 16:43	09/06/19 20:32	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	10	X		60 - 140			09/03/19 16:43	09/06/19 20:32	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 13:37	1
PCB-1221	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 13:37	1
PCB-1232	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 13:37	1
PCB-1242	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 13:37	1
PCB-1248	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 13:37	1
PCB-1254	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 13:37	1
PCB-1260	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 13:37	1
PCB-1268	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 13:37	1
PCB-1262	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 13:37	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-06-SO

Date Collected: 08/22/19 12:03
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-6

Matrix: Solid

Percent Solids: 79.2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	61		31 - 142	09/06/19 08:42	09/09/19 13:37	1
DCB Decachlorobiphenyl (Surr)	0.2	X	20 - 150	09/06/19 08:42	09/09/19 13:37	1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	9400		370	130	mg/Kg	✉	09/03/19 11:22	09/03/19 23:03	10
Residual Range Organics (RRO) (C25-C36)	33000		750	190	mg/Kg	✉	09/03/19 11:22	09/03/19 23:03	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	104		50 - 150	09/03/19 11:22	09/03/19 23:03	10
<i>n</i> -Tricontane-d62	21	X	50 - 150	09/03/19 11:22	09/03/19 23:03	10

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.4	B	0.23	0.046	mg/Kg	✉	09/06/19 10:17	09/10/19 18:29	5
Barium	140		0.46	0.10	mg/Kg	✉	09/06/19 10:17	09/10/19 18:29	5
Cadmium	0.41		0.18	0.035	mg/Kg	✉	09/06/19 10:17	09/10/19 18:29	5
Chromium	24	B	0.23	0.029	mg/Kg	✉	09/06/19 10:17	09/10/19 18:29	5
Lead	10		0.23	0.022	mg/Kg	✉	09/06/19 10:17	09/10/19 18:29	5
Selenium	0.78	B	0.50	0.13	mg/Kg	✉	09/06/19 10:17	09/10/19 18:29	5
Silver	0.11		0.091	0.0091	mg/Kg	✉	09/06/19 10:17	09/10/19 18:29	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.064		0.030	0.0090	mg/Kg	✉	09/09/19 10:05	09/09/19 15:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.2		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	20.8		0.1	0.1	%			08/30/19 14:26	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-07-SO
Date Collected: 08/22/19 12:09
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-7
Matrix: Solid
Percent Solids: 83.6

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		6.5	0.36	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
1,1,2,2-Tetrachloroethane	ND		13	1.8	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
1,1,2-Trichloroethane	ND		6.5	0.59	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
1,1-Dichloroethene	ND *		6.5	0.80	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
1,2-Dibromoethane	ND		6.5	0.58	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
1,2-Dichloroethane	ND		6.5	0.81	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
1,4-Dichlorobenzene	ND *		6.5	0.41	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Benzene	0.62 J *		6.5	0.54	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Bromodichloromethane	ND		6.5	0.41	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Bromoform	ND		6.5	1.5	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Bromomethane	ND		6.5	0.96	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Chloroform	ND		6.5	0.39	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
cis-1,3-Dichloropropene	ND		6.5	0.48	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Dibromochloromethane	ND		6.5	0.74	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Dibromomethane	ND		6.5	0.76	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Hexachlorobutadiene	ND		6.5	0.85	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Naphthalene	17 * B		6.5	1.2	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Tetrachloroethene	ND *		6.5	0.81	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
trans-1,3-Dichloropropene	ND		6.5	0.44	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Trichloroethene	ND *		6.5	0.56	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1
Vinyl chloride	ND		26	3.1	ug/Kg	✉	09/05/19 14:04	09/05/19 20:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	86		81 - 121	09/05/19 14:04	09/05/19 20:45	1
4-Bromofluorobenzene (Surr)	96		79 - 120	09/05/19 14:04	09/05/19 20:45	1
Dibromofluoromethane (Surr)	94		78 - 118	09/05/19 14:04	09/05/19 20:45	1
Toluene-d8 (Surr)	102		79 - 119	09/05/19 14:04	09/05/19 20:45	1
Trifluorotoluene (Surr)	102		52 - 152	09/05/19 14:04	09/05/19 20:45	1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	23 H B		6.5	1.2	ug/Kg	✉	09/14/19 14:31	09/14/19 20:57	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	94		81 - 121	09/14/19 14:31	09/14/19 20:57	1			
4-Bromofluorobenzene (Surr)	91		79 - 120	09/14/19 14:31	09/14/19 20:57	1			
Dibromofluoromethane (Surr)	93		78 - 118	09/14/19 14:31	09/14/19 20:57	1			
Toluene-d8 (Surr)	100		79 - 119	09/14/19 14:31	09/14/19 20:57	1			
Trifluorotoluene (Surr)	114		52 - 152	09/14/19 14:31	09/14/19 20:57	1			

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		52	12	ug/Kg	✉	09/04/19 12:48	09/04/19 21:25	1
1,1-Dichloroethane	ND		52	12	ug/Kg	✉	09/04/19 12:48	09/04/19 21:25	1
1,1-Dichloropropene	ND		52	6.8	ug/Kg	✉	09/04/19 12:48	09/04/19 21:25	1
1,2,3-Trichlorobenzene	ND		190	41	ug/Kg	✉	09/04/19 12:48	09/04/19 21:25	1
1,2,3-Trichloropropane	ND		52	15	ug/Kg	✉	09/04/19 12:48	09/04/19 21:25	1
1,2,4-Trichlorobenzene	ND		77	20	ug/Kg	✉	09/04/19 12:48	09/04/19 21:25	1
1,2,4-Trimethylbenzene	ND		52	17	ug/Kg	✉	09/04/19 12:48	09/04/19 21:25	1
1,2-Dibromo-3-Chloropropane	ND		320	20	ug/Kg	✉	09/04/19 12:48	09/04/19 21:25	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-07-SO
Date Collected: 08/22/19 12:09
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-7
Matrix: Solid
Percent Solids: 83.6

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		52	11	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
1,2-Dichloropropane	ND		26	8.5	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
1,3,5-Trimethylbenzene	ND		52	9.8	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
1,3-Dichlorobenzene	ND		77	17	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
1,3-Dichloropropane	ND		77	18	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
2,2-Dichloropropane	ND		52	16	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
2-Butanone	ND		770	240	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
2-Chlorotoluene	ND		52	11	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
4-Chlorotoluene	ND		52	13	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
4-Isopropyltoluene	ND		52	13	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
4-Methyl-2-pentanone	ND		520	100	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Acetone	ND		1000	220	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Bromobenzene	ND		130	22	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Bromochloromethane	ND		52	8.0	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Carbon disulfide	ND		77	16	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Carbon tetrachloride	ND		26	10	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Chlorobenzene	ND		52	6.2	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Chloroethane	ND		520	13	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Chloromethane	ND		130	13	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
cis-1,2-Dichloroethene	ND		77	16	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Dichlorodifluoromethane	ND		260	59	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Ethylbenzene	ND		52	12	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Isopropylbenzene	ND		52	11	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Methyl tert-butyl ether	ND		52	7.7	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Methylene Chloride	ND		320	83	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
m-Xylene & p-Xylene	ND		260	19	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
n-Butylbenzene	ND		190	10	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
N-Propylbenzene	ND		52	8.9	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
o-Xylene	ND		77	17	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
sec-Butylbenzene	ND		52	11	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Styrene	ND		52	7.9	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
t-Butylbenzene	ND		52	9.9	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Toluene	ND		190	17	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
trans-1,2-Dichloroethene	ND		77	19	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1
Trichlorofluoromethane	ND		260	15	ug/Kg	⊗	09/04/19 12:48	09/04/19 21:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121	09/04/19 12:48	09/04/19 21:25	1
4-Bromofluorobenzene (Surr)	117		80 - 120	09/04/19 12:48	09/04/19 21:25	1
Dibromofluoromethane (Surr)	97		80 - 120	09/04/19 12:48	09/04/19 21:25	1
Toluene-d8 (Surr)	101		80 - 120	09/04/19 12:48	09/04/19 21:25	1
Trifluorotoluene (Surr)	72	X	80 - 120	09/04/19 12:48	09/04/19 21:25	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		220	90	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
2,4-Dinitrophenol	ND		3300	650	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
2,4-Dinitrotoluene	ND		430	86	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
2,6-Dinitrotoluene	ND		220	67	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
3,3'-Dichlorobenzidine	ND		220	94	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-07-SO
Date Collected: 08/22/19 12:09
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-7
Matrix: Solid
Percent Solids: 83.6

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	ND		3300	1000	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
Bis(2-chloroethyl)ether	ND		220	66	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
Hexachlorobenzene	990		220	80	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
Hexachlorobutadiene	ND		220	42	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
Hexachlorocyclopentadiene	ND		220	76	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
Hexachloroethane	ND		220	65	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
Nitrobenzene	ND		220	67	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
N-Nitrosodimethylamine	ND		430	100	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
N-Nitrosodi-n-propylamine	ND		220	79	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
Pentachlorophenol	4000 J		6500	2000	ug/Kg	⊗	09/04/19 09:12	09/05/19 13:59	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	115		28 - 143				09/04/19 09:12	09/05/19 13:59	20
2-Fluorobiphenyl	77		42 - 140				09/04/19 09:12	09/05/19 13:59	20
Nitrobenzene-d5	376 X		38 - 141				09/04/19 09:12	09/05/19 13:59	20
Terphenyl-d14	85		68 - 138				09/04/19 09:12	09/05/19 13:59	20

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1400	160	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
1,2-Dichlorobenzene	ND		1400	330	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
1,3-Dichlorobenzene	ND		1400	130	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
1,4-Dichlorobenzene	ND		1400	230	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
1-Methylnaphthalene	ND		810	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
2,4,5-Trichlorophenol	ND		5400	1200	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
2,4-Dichlorophenol	ND		2700	410	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
2,4-Dimethylphenol	ND		2700	410	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
2-Chloronaphthalene	ND		680	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
2-Chlorophenol	ND		5400	350	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
2-Methylnaphthalene	ND		1400	240	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
2-Methylphenol	ND		4100	270	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
2-Nitroaniline	ND		2700	410	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
2-Nitrophenol	ND		5400	570	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
3 & 4 Methylphenol	ND		5400	410	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
3-Nitroaniline	ND		5400	1100	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
4,6-Dinitro-2-methylphenol	ND		27000	2700	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
4-Bromophenyl phenyl ether	ND		5400	250	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
4-Chloro-3-methylphenol	ND		4100	890	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
4-Chlorophenyl phenyl ether	ND		5400	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
4-Nitroaniline	ND		4100	1400	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
4-Nitrophenol	ND		41000	10000	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Acenaphthene	ND		680	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Acenaphthylene	ND		680	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Anthracene	ND		680	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Benzo[a]anthracene	ND		680	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Benzo[a]pyrene	ND		1600	350	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Benzo[b]fluoranthene	ND		680	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Benzo[g,h,i]perylene	ND		1600	240	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Benzo[k]fluoranthene	ND		1600	380	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Benzoic acid	ND		54000	16000	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-07-SO
Date Collected: 08/22/19 12:09
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-7
Matrix: Solid
Percent Solids: 83.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	ND		14000	2100	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Bis(2-chloroethoxy)methane	ND		5400	490	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Bis(2-ethylhexyl) phthalate	2400	J	16000	1900	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
bis(chloroisopropyl) ether	ND		5400	380	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Butyl benzyl phthalate	ND		5400	1400	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Carbazole	ND *		4100	220	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Chrysene	ND		1600	350	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Dibenz(a,h)anthracene	ND		1400	330	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Dibenzofuran	ND		4100	160	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Diethyl phthalate	ND		41000	2100	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Dimethyl phthalate	ND		4100	350	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Di-n-butyl phthalate	ND		14000	1500	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Di-n-octyl phthalate	ND		4100	1500	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Fluoranthene	ND		680	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Fluorene	ND		680	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Indeno[1,2,3-cd]pyrene	ND		1100	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Isophorone	ND		4100	200	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Naphthalene	ND		680	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
N-Nitrosodiphenylamine	ND		1600	220	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Phenanthrene	ND		1600	330	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Phenol	ND		4100	620	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Pyrene	360	J	1600	170	ug/Kg	⊗	09/04/19 09:12	09/06/19 22:39	25
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	188	X	52 - 125				09/04/19 09:12	09/06/19 22:39	25
2-Fluorobiphenyl	89		57 - 120				09/04/19 09:12	09/06/19 22:39	25
2-Fluorophenol (Surr)	81		60 - 125				09/04/19 09:12	09/06/19 22:39	25
Nitrobenzene-d5 (Surr)	403	X	62 - 120				09/04/19 09:12	09/06/19 22:39	25
Phenol-d5 (Surr)	56	X	59 - 120				09/04/19 09:12	09/06/19 22:39	25
Terphenyl-d14 (Surr)	112		58 - 120				09/04/19 09:12	09/06/19 22:39	25

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		12	2.5	ug/Kg	⊗	09/06/19 08:42	09/09/19 13:58	1
PCB-1221	ND		12	2.5	ug/Kg	⊗	09/06/19 08:42	09/09/19 13:58	1
PCB-1232	ND		12	2.5	ug/Kg	⊗	09/06/19 08:42	09/09/19 13:58	1
PCB-1242	ND		12	2.5	ug/Kg	⊗	09/06/19 08:42	09/09/19 13:58	1
PCB-1248	ND		12	2.5	ug/Kg	⊗	09/06/19 08:42	09/09/19 13:58	1
PCB-1254	ND		12	2.5	ug/Kg	⊗	09/06/19 08:42	09/09/19 13:58	1
PCB-1260	ND		12	2.5	ug/Kg	⊗	09/06/19 08:42	09/09/19 13:58	1
PCB-1268	ND		12	2.5	ug/Kg	⊗	09/06/19 08:42	09/09/19 13:58	1
PCB-1262	ND		12	2.5	ug/Kg	⊗	09/06/19 08:42	09/09/19 13:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	1355	X	31 - 142				09/06/19 08:42	09/09/19 13:58	1
DCB Decachlorobiphenyl (Surr)	5	X	20 - 150				09/06/19 08:42	09/09/19 13:58	1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	9100		120	40	mg/Kg	⊗	09/03/19 11:22	09/05/19 00:46	10

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-07-SO

Lab Sample ID: 580-88695-7

Date Collected: 08/22/19 12:09
Date Received: 08/26/19 12:25

Matrix: Solid

Percent Solids: 83.6

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Residual Range Organics (RRO) (C25-C36)	9300		240	59	mg/Kg	⌚	09/03/19 11:22	09/05/19 00:46	10
Surrogate									
o-Terphenyl									
108									
n-Tricontane-d62									
18 X									
50 - 150									
50 - 150									

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	23	B	0.22	0.044	mg/Kg	⌚	09/06/19 10:17	09/10/19 18:34	5
Barium	120		0.44	0.099	mg/Kg	⌚	09/06/19 10:17	09/10/19 18:34	5
Cadmium	0.31		0.17	0.034	mg/Kg	⌚	09/06/19 10:17	09/10/19 18:34	5
Chromium	23	B	0.22	0.027	mg/Kg	⌚	09/06/19 10:17	09/10/19 18:34	5
Lead	7.6		0.22	0.021	mg/Kg	⌚	09/06/19 10:17	09/10/19 18:34	5
Selenium	0.67	B	0.48	0.12	mg/Kg	⌚	09/06/19 10:17	09/10/19 18:34	5
Silver	0.089		0.087	0.0087	mg/Kg	⌚	09/06/19 10:17	09/10/19 18:34	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.6		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	16.4		0.1	0.1	%			08/30/19 14:26	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-08-SO
Date Collected: 08/22/19 12:05
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-8
Matrix: Solid
Percent Solids: 86.1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		6.3	0.35	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
1,1,2,2-Tetrachloroethane	ND		13	1.7	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
1,1,2-Trichloroethane	ND		6.3	0.58	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
1,1-Dichloroethene	ND *		6.3	0.78	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
1,2-Dibromoethane	ND		6.3	0.56	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
1,2-Dichloroethane	ND		6.3	0.79	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
1,4-Dichlorobenzene	ND *		6.3	0.40	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Benzene	ND *		6.3	0.53	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Bromodichloromethane	ND		6.3	0.39	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Bromoform	ND		6.3	1.4	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Bromomethane	ND		6.3	0.93	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Chloroform	ND		6.3	0.38	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
cis-1,3-Dichloropropene	ND		6.3	0.46	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Dibromochloromethane	ND		6.3	0.71	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Dibromomethane	ND		6.3	0.74	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Hexachlorobutadiene	ND		6.3	0.83	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Naphthalene	5.9 J * B		6.3	1.1	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Tetrachloroethene	ND *		6.3	0.79	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
trans-1,3-Dichloropropene	ND		6.3	0.43	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Trichloroethene	ND *		6.3	0.54	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Vinyl chloride	ND		25	3.0	ug/Kg	✉	09/05/19 14:04	09/05/19 21:10	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	77	X		81 - 121			09/05/19 14:04	09/05/19 21:10	1
4-Bromofluorobenzene (Surr)	94			79 - 120			09/05/19 14:04	09/05/19 21:10	1
Dibromofluoromethane (Surr)	92			78 - 118			09/05/19 14:04	09/05/19 21:10	1
Toluene-d8 (Surr)	105			79 - 119			09/05/19 14:04	09/05/19 21:10	1
Trifluorotoluene (Surr)	75			52 - 152			09/05/19 14:04	09/05/19 21:10	1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	16 H B		6.3	1.1	ug/Kg	✉	09/14/19 14:31	09/14/19 21:22	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83			81 - 121			09/14/19 14:31	09/14/19 21:22	1
4-Bromofluorobenzene (Surr)	98			79 - 120			09/14/19 14:31	09/14/19 21:22	1
Dibromofluoromethane (Surr)	87			78 - 118			09/14/19 14:31	09/14/19 21:22	1
Toluene-d8 (Surr)	104			79 - 119			09/14/19 14:31	09/14/19 21:22	1
Trifluorotoluene (Surr)	96			52 - 152			09/14/19 14:31	09/14/19 21:22	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		50	12	ug/Kg	✉	09/04/19 12:48	09/04/19 21:50	1
1,1-Dichloroethane	ND		50	12	ug/Kg	✉	09/04/19 12:48	09/04/19 21:50	1
1,1-Dichloropropene	ND		50	6.6	ug/Kg	✉	09/04/19 12:48	09/04/19 21:50	1
1,2,3-Trichlorobenzene	ND		190	40	ug/Kg	✉	09/04/19 12:48	09/04/19 21:50	1
1,2,3-Trichloropropane	ND		50	14	ug/Kg	✉	09/04/19 12:48	09/04/19 21:50	1
1,2,4-Trichlorobenzene	ND		75	19	ug/Kg	✉	09/04/19 12:48	09/04/19 21:50	1
1,2,4-Trimethylbenzene	ND		50	17	ug/Kg	✉	09/04/19 12:48	09/04/19 21:50	1
1,2-Dibromo-3-Chloropropane	ND		310	19	ug/Kg	✉	09/04/19 12:48	09/04/19 21:50	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-08-SO
Date Collected: 08/22/19 12:05
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-8
Matrix: Solid
Percent Solids: 86.1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1,2-Dichlorobenzene	ND		50	11	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
1,2-Dichloropropane	ND		25	8.3	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
1,3,5-Trimethylbenzene	ND		50	9.5	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
1,3-Dichlorobenzene	ND		75	17	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
1,3-Dichloropropane	ND		75	17	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
2,2-Dichloropropane	ND		50	15	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
2-Butanone	ND		750	230	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
2-Chlorotoluene	ND		50	11	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
4-Chlorotoluene	ND		50	12	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
4-Isopropyltoluene	ND		50	13	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
4-Methyl-2-pentanone	ND		500	100	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Acetone	ND		1000	220	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Bromobenzene	ND		130	21	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Bromochloromethane	ND		50	7.8	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Carbon disulfide	ND		75	15	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Carbon tetrachloride	ND		25	10	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Chlorobenzene	ND		50	6.0	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Chloroethane	ND		500	13	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Chloromethane	ND		130	13	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
cis-1,2-Dichloroethene	ND		75	16	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Dichlorodifluoromethane	ND		250	57	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Ethylbenzene	ND		50	11	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Isopropylbenzene	ND		50	11	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Methyl tert-butyl ether	26	J		50	7.5	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1
Methylene Chloride	ND		310	81	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
m-Xylene & p-Xylene	ND		250	19	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
n-Butylbenzene	ND		190	10	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
N-Propylbenzene	ND		50	8.6	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
o-Xylene	ND		75	17	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
sec-Butylbenzene	ND		50	11	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Styrene	ND		50	7.6	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
t-Butylbenzene	ND		50	9.6	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Toluene	ND		190	17	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
trans-1,2-Dichloroethene	ND		75	18	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	
Trichlorofluoromethane	ND		250	14	ug/Kg	⌚	09/04/19 12:48	09/04/19 21:50	1	

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		80 - 121	09/04/19 12:48	09/04/19 21:50	1
4-Bromofluorobenzene (Surr)	97		80 - 120	09/04/19 12:48	09/04/19 21:50	1
Dibromofluoromethane (Surr)	93		80 - 120	09/04/19 12:48	09/04/19 21:50	1
Toluene-d8 (Surr)	106		80 - 120	09/04/19 12:48	09/04/19 21:50	1
Trifluorotoluene (Surr)	59	X	80 - 120	09/04/19 12:48	09/04/19 21:50	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		53	22	ug/Kg	⌚	09/04/19 09:12	09/04/19 20:27	5
2,4-Dinitrophenol	ND		790	160	ug/Kg	⌚	09/04/19 09:12	09/04/19 20:27	5
2,4-Dinitrotoluene	ND		110	21	ug/Kg	⌚	09/04/19 09:12	09/04/19 20:27	5
2,6-Dinitrotoluene	860		53	16	ug/Kg	⌚	09/04/19 09:12	09/04/19 20:27	5
3,3'-Dichlorobenzidine	ND		53	23	ug/Kg	⌚	09/04/19 09:12	09/04/19 20:27	5

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-08-SO
Date Collected: 08/22/19 12:05
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-8
Matrix: Solid
Percent Solids: 86.1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	ND		790	250	ug/Kg	⊗	09/04/19 09:12	09/04/19 20:27	5
Bis(2-chloroethyl)ether	ND		53	16	ug/Kg	⊗	09/04/19 09:12	09/04/19 20:27	5
Hexachlorobenzene	480		53	19	ug/Kg	⊗	09/04/19 09:12	09/04/19 20:27	5
Hexachlorobutadiene	ND		53	10	ug/Kg	⊗	09/04/19 09:12	09/04/19 20:27	5
Hexachlorocyclopentadiene	ND		53	18	ug/Kg	⊗	09/04/19 09:12	09/04/19 20:27	5
Hexachloroethane	ND		53	16	ug/Kg	⊗	09/04/19 09:12	09/04/19 20:27	5
Nitrobenzene	120		53	16	ug/Kg	⊗	09/04/19 09:12	09/04/19 20:27	5
N-Nitrosodimethylamine	ND		110	24	ug/Kg	⊗	09/04/19 09:12	09/04/19 20:27	5
N-Nitrosodi-n-propylamine	ND		53	19	ug/Kg	⊗	09/04/19 09:12	09/04/19 20:27	5
Pentachlorophenol	13000		1600	480	ug/Kg	⊗	09/04/19 09:12	09/04/19 20:27	5
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	95		28 - 143				09/04/19 09:12	09/04/19 20:27	5
2-Fluorobiphenyl	78		42 - 140				09/04/19 09:12	09/04/19 20:27	5
Nitrobenzene-d5	85		38 - 141				09/04/19 09:12	09/04/19 20:27	5
Terphenyl-d14	111		68 - 138				09/04/19 09:12	09/04/19 20:27	5

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		530	63	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
1,2-Dichlorobenzene	ND		530	130	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
1,3-Dichlorobenzene	ND		530	51	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
1,4-Dichlorobenzene	ND		530	87	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
1-Methylnaphthalene	ND		320	53	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
2,4,5-Trichlorophenol	ND		2100	470	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
2,4-Dichlorophenol	ND		1100	160	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
2,4-Dimethylphenol	ND		1100	160	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
2-Chloronaphthalene	ND		260	53	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
2-Chlorophenol	ND		2100	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
2-Methylnaphthalene	ND		530	93	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
2-Methylphenol	ND		1600	100	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
2-Nitroaniline	ND		1100	160	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
2-Nitrophenol	ND		2100	220	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
3 & 4 Methylphenol	ND		2100	160	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
3-Nitroaniline	ND		2100	420	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
4,6-Dinitro-2-methylphenol	ND		11000	1100	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
4-Bromophenyl phenyl ether	ND		2100	96	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
4-Chloro-3-methylphenol	ND		1600	350	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
4-Chlorophenyl phenyl ether	ND		2100	66	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
4-Nitroaniline	ND		1600	530	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
4-Nitrophenol	ND		16000	3900	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
Acenaphthene	ND		260	53	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
Acenaphthylene	ND		260	53	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
Anthracene	ND		260	53	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
Benzo[a]anthracene	ND		260	53	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
Benzo[a]pyrene	ND		630	140	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
Benzo[b]fluoranthene	ND		260	53	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
Benzo[g,h,i]perylene	ND		630	95	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
Benzo[k]fluoranthene	ND		630	150	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10
Benzoic acid	ND		21000	6100	ug/Kg	⊗	09/04/19 09:12	09/06/19 23:03	10

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-08-SO
Date Collected: 08/22/19 12:05
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-8
Matrix: Solid
Percent Solids: 86.1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	ND		5300	810	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Bis(2-chloroethoxy)methane	ND		2100	190	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Bis(2-ethylhexyl) phthalate	2600	J	6300	750	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
bis(chloroisopropyl) ether	ND		2100	150	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Butyl benzyl phthalate	ND		2100	540	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Carbazole	ND *		1600	86	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Chrysene	ND		630	140	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Dibenz(a,h)anthracene	ND		530	130	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Dibenzofuran	ND		1600	62	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Diethyl phthalate	ND		16000	800	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Dimethyl phthalate	ND		1600	140	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Di-n-butyl phthalate	ND		5300	600	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Di-n-octyl phthalate	ND		1600	600	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Fluoranthene	ND		260	53	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Fluorene	ND		260	53	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Indeno[1,2,3-cd]pyrene	ND		420	53	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Isophorone	ND		1600	78	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Naphthalene	ND		260	53	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
N-Nitrosodiphenylamine	ND		630	84	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Phenanthrene	ND		630	130	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Phenol	ND		1600	240	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Pyrene	300	J	630	67	ug/Kg	✉	09/04/19 09:12	09/06/19 23:03	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	151	X	52 - 125				09/04/19 09:12	09/06/19 23:03	10
2-Fluorobiphenyl	86		57 - 120				09/04/19 09:12	09/06/19 23:03	10
2-Fluorophenol (Surr)	98		60 - 125				09/04/19 09:12	09/06/19 23:03	10
Nitrobenzene-d5 (Surr)	118		62 - 120				09/04/19 09:12	09/06/19 23:03	10
Phenol-d5 (Surr)	108		59 - 120				09/04/19 09:12	09/06/19 23:03	10
Terphenyl-d14 (Surr)	119		58 - 120				09/04/19 09:12	09/06/19 23:03	10

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.30	0.067	ug/Kg	✉	09/03/19 16:43	09/06/19 20:48	1
Ethylene Dibromide	ND		0.051	0.012	ug/Kg	✉	09/03/19 16:43	09/06/19 20:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	13	X	60 - 140				09/03/19 16:43	09/06/19 20:48	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		12	2.5	ug/Kg	✉	09/06/19 08:42	09/09/19 14:39	1
PCB-1221	ND		12	2.5	ug/Kg	✉	09/06/19 08:42	09/09/19 14:39	1
PCB-1232	ND		12	2.5	ug/Kg	✉	09/06/19 08:42	09/09/19 14:39	1
PCB-1242	ND		12	2.5	ug/Kg	✉	09/06/19 08:42	09/09/19 14:39	1
PCB-1248	ND		12	2.5	ug/Kg	✉	09/06/19 08:42	09/09/19 14:39	1
PCB-1254	ND		12	2.5	ug/Kg	✉	09/06/19 08:42	09/09/19 14:39	1
PCB-1260	ND		12	2.5	ug/Kg	✉	09/06/19 08:42	09/09/19 14:39	1
PCB-1268	ND		12	2.5	ug/Kg	✉	09/06/19 08:42	09/09/19 14:39	1
PCB-1262	ND		12	2.5	ug/Kg	✉	09/06/19 08:42	09/09/19 14:39	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-08-SO
Date Collected: 08/22/19 12:05
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-8
Matrix: Solid
Percent Solids: 86.1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	43		31 - 142	09/06/19 08:42	09/09/19 14:39	1
DCB Decachlorobiphenyl (Surr)	197	X	20 - 150	09/06/19 08:42	09/09/19 14:39	1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	5800		230	77	mg/Kg	✉	09/03/19 11:22	09/03/19 23:42	20
Residual Range Organics (RRO) (C25-C36)	21000		460	110	mg/Kg	✉	09/03/19 11:22	09/03/19 23:42	20

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	7.5	B	0.22	0.043	mg/Kg	✉	09/06/19 10:17	09/10/19 18:38	5
Barium	120		0.43	0.099	mg/Kg	✉	09/06/19 10:17	09/10/19 18:38	5
Cadmium	0.45		0.17	0.033	mg/Kg	✉	09/06/19 10:17	09/10/19 18:38	5
Chromium	20	B	0.22	0.027	mg/Kg	✉	09/06/19 10:17	09/10/19 18:38	5
Lead	8.7		0.22	0.021	mg/Kg	✉	09/06/19 10:17	09/10/19 18:38	5
Selenium	0.65	B	0.48	0.12	mg/Kg	✉	09/06/19 10:17	09/10/19 18:38	5
Silver	0.071	J	0.087	0.0087	mg/Kg	✉	09/06/19 10:17	09/10/19 18:38	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.016	J	0.027	0.0080	mg/Kg	✉	09/09/19 10:05	09/09/19 15:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.1		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	13.9		0.1	0.1	%			08/30/19 14:26	1

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: Trip Blank
Date Collected: 08/22/19 00:01
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-9
Matrix: Solid

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	0.28	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
1,1,2,2-Tetrachloroethane	ND		10	1.4	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
1,1,2-Trichloroethane	ND		5.0	0.46	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
1,1-Dichloroethene	ND *		5.0	0.62	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
1,2-Dibromoethane	ND		5.0	0.45	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
1,2-Dichloroethane	ND		5.0	0.63	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
1,4-Dichlorobenzene	ND *		5.0	0.32	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Benzene	ND *		5.0	0.42	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Bromodichloromethane	ND		5.0	0.32	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Bromoform	ND		5.0	1.1	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Bromomethane	ND		5.0	0.74	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Chloroform	ND		5.0	0.30	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
cis-1,3-Dichloropropene	1.1 JB		5.0	0.37	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Dibromochloromethane	ND		5.0	0.57	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Dibromomethane	ND		5.0	0.59	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Hexachlorobutadiene	2.7 J		5.0	0.66	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Naphthalene	4.3 J * B		5.0	0.91	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Tetrachloroethene	ND *		5.0	0.63	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
trans-1,3-Dichloropropene	ND		5.0	0.34	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Trichloroethene	ND *		5.0	0.43	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Vinyl chloride	ND		20	2.4	ug/Kg	09/05/19 14:04	09/05/19 19:01		1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		81 - 121				09/05/19 14:04	09/05/19 19:01	1
4-Bromofluorobenzene (Surr)	103		79 - 120				09/05/19 14:04	09/05/19 19:01	1
Dibromofluoromethane (Surr)	98		78 - 118				09/05/19 14:04	09/05/19 19:01	1
Toluene-d8 (Surr)	100		79 - 119				09/05/19 14:04	09/05/19 19:01	1
Trifluorotoluene (Surr)	106		52 - 152				09/05/19 14:04	09/05/19 19:01	1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	11 HB		5.0	0.66	ug/Kg	09/14/19 14:31	09/14/19 19:39		1
Naphthalene	19 HB		5.0	0.91	ug/Kg	09/14/19 14:31	09/14/19 19:39		1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 121				09/14/19 14:31	09/14/19 19:39	1
4-Bromofluorobenzene (Surr)	107		79 - 120				09/14/19 14:31	09/14/19 19:39	1
Dibromofluoromethane (Surr)	97		78 - 118				09/14/19 14:31	09/14/19 19:39	1
Toluene-d8 (Surr)	101		79 - 119				09/14/19 14:31	09/14/19 19:39	1
Trifluorotoluene (Surr)	107		52 - 152				09/14/19 14:31	09/14/19 19:39	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		40	9.6	ug/Kg	09/04/19 12:48	09/04/19 22:15		1
1,1-Dichloroethane	ND		40	9.2	ug/Kg	09/04/19 12:48	09/04/19 22:15		1
1,1-Dichloropropene	ND		40	5.3	ug/Kg	09/04/19 12:48	09/04/19 22:15		1
1,2,3-Trichlorobenzene	ND		150	32	ug/Kg	09/04/19 12:48	09/04/19 22:15		1
1,2,3-Trichloropropane	ND		40	12	ug/Kg	09/04/19 12:48	09/04/19 22:15		1
1,2,4-Trichlorobenzene	ND		60	15	ug/Kg	09/04/19 12:48	09/04/19 22:15		1
1,2,4-Trimethylbenzene	ND		40	14	ug/Kg	09/04/19 12:48	09/04/19 22:15		1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: Trip Blank

Date Collected: 08/22/19 00:01

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-9

Matrix: Solid

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		250	15	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
1,2-Dichlorobenzene	ND		40	8.7	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
1,2-Dichloropropane	ND		20	6.6	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
1,3,5-Trimethylbenzene	ND		40	7.6	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
1,3-Dichlorobenzene	ND		60	13	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
1,3-Dichloropropane	ND		60	14	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
2,2-Dichloropropane	ND		40	12	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
2-Butanone	ND		600	190	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
2-Chlorotoluene	ND		40	8.8	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
4-Chlorotoluene	ND		40	9.8	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
4-Isopropyltoluene	ND		40	10	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
4-Methyl-2-pentanone	ND		400	81	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Acetone	ND		800	170	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Bromobenzene	ND		100	17	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Bromochloromethane	ND		40	6.2	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Carbon disulfide	ND		60	12	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Carbon tetrachloride	ND		20	8.1	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Chlorobenzene	ND		40	4.8	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Chloroethane	ND		400	10	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Chloromethane	ND		100	10	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
cis-1,2-Dichloroethene	ND		60	13	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Dichlorodifluoromethane	ND		200	46	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Ethylbenzene	ND		40	9.1	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Isopropylbenzene	ND		40	8.6	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Methyl tert-butyl ether	ND		40	6.0	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Methylene Chloride	ND		250	65	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
m-Xylene & p-Xylene	ND		200	15	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
n-Butylbenzene	ND		150	8.0	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
N-Propylbenzene	ND		40	6.9	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
o-Xylene	ND		60	13	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
sec-Butylbenzene	ND		40	8.6	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Styrene	ND		40	6.1	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
t-Butylbenzene	ND		40	7.7	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Toluene	ND		150	14	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
trans-1,2-Dichloroethene	ND		60	15	ug/Kg		09/04/19 12:48	09/04/19 22:15	1
Trichlorofluoromethane	ND		200	11	ug/Kg		09/04/19 12:48	09/04/19 22:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121		09/04/19 12:48	09/04/19 22:15
4-Bromofluorobenzene (Surr)	96		80 - 120		09/04/19 12:48	09/04/19 22:15
Dibromofluoromethane (Surr)	94		80 - 120		09/04/19 12:48	09/04/19 22:15
Toluene-d8 (Surr)	104		80 - 120		09/04/19 12:48	09/04/19 22:15
Trifluorotoluene (Surr)	73	X	80 - 120		09/04/19 12:48	09/04/19 22:15

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: Trip Blank
Date Collected: 08/20/19 00:01
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-10
Matrix: Solid

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	0.28	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
1,1,2,2-Tetrachloroethane	ND		10	1.4	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
1,1,2-Trichloroethane	ND *		5.0	0.46	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
1,1-Dichloroethene	ND *		5.0	0.62	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
1,2-Dibromoethane	ND		5.0	0.45	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
1,2-Dichloroethane	ND *		5.0	0.63	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
1,4-Dichlorobenzene	ND		5.0	0.32	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Benzene	ND *		5.0	0.42	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Bromodichloromethane	ND *		5.0	0.32	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Bromoform	ND		5.0	1.1	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Bromomethane	ND *		5.0	0.74	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Chloroform	ND *		5.0	0.30	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
cis-1,3-Dichloropropene	ND *		5.0	0.37	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Dibromochloromethane	ND		5.0	0.57	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Dibromomethane	ND *		5.0	0.59	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Hexachlorobutadiene	ND		5.0	0.66	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Naphthalene	1.7 JB		5.0	0.91	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Tetrachloroethene	ND		5.0	0.63	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
trans-1,3-Dichloropropene	ND *		5.0	0.34	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Trichloroethene	ND *		5.0	0.43	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Vinyl chloride	ND *		20	2.4	ug/Kg	09/01/19 13:41	09/02/19 05:01		1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		81 - 121				09/01/19 13:41	09/02/19 05:01	1
4-Bromofluorobenzene (Surr)	112		79 - 120				09/01/19 13:41	09/02/19 05:01	1
Dibromofluoromethane (Surr)	110		78 - 118				09/01/19 13:41	09/02/19 05:01	1
Toluene-d8 (Surr)	98		79 - 119				09/01/19 13:41	09/02/19 05:01	1
Trifluorotoluene (Surr)	117		52 - 152				09/01/19 13:41	09/02/19 05:01	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		40	9.6	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,1-Dichloroethane	ND		40	9.2	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,1-Dichloropropene	ND		40	5.3	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,2,3-Trichlorobenzene	62 JB		150	32	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,2,3-Trichloropropane	ND		40	12	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,2,4-Trichlorobenzene	35 JB		60	15	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,2,4-Trimethylbenzene	ND		40	14	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,2-Dibromo-3-Chloropropane	16 JB		250	15	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,2-Dichlorobenzene	ND		40	8.7	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,2-Dichloropropane	ND		20	6.6	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,3,5-Trimethylbenzene	7.7 JB		40	7.6	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,3-Dichlorobenzene	ND		60	13	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
1,3-Dichloropropane	ND		60	14	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
2,2-Dichloropropane	ND		40	12	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
2-Butanone	ND		600	190	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
2-Chlorotoluene	ND		40	8.8	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
4-Chlorotoluene	ND		40	9.8	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
4-Isopropyltoluene	13 JB		40	10	ug/Kg	08/30/19 20:41	08/31/19 10:11		1
4-Methyl-2-pentanone	ND *		400	81	ug/Kg	08/30/19 20:41	08/31/19 10:11		1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: Trip Blank

Lab Sample ID: 580-88695-10

Date Collected: 08/20/19 00:01

Matrix: Solid

Date Received: 08/26/19 12:25

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	280	J B	800	170	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Bromobenzene	ND		100	17	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Bromoform	ND		40	6.2	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Carbon disulfide	ND		60	12	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Carbon tetrachloride	ND		20	8.1	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Chlorobenzene	ND		40	4.8	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Chloroethane	ND		400	10	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Chloromethane	ND		100	10	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
cis-1,2-Dichloroethene	ND		60	13	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Dichlorodifluoromethane	ND		200	46	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Ethylbenzene	ND		40	9.1	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Isopropylbenzene	ND		40	8.6	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Methyl tert-butyl ether	ND		40	6.0	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Methylene Chloride	ND		250	65	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
m-Xylene & p-Xylene	ND		200	15	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
n-Butylbenzene	19	J	150	8.0	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
N-Propylbenzene	ND		40	6.9	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
o-Xylene	ND		60	13	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
sec-Butylbenzene	11	J	40	8.6	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Styrene	ND		40	6.1	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
t-Butylbenzene	ND		40	7.7	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Toluene	ND		150	14	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
trans-1,2-Dichloroethene	ND		60	15	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Trichlorofluoromethane	ND		200	11	ug/Kg		08/30/19 20:41	08/31/19 10:11	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99			80 - 121			08/30/19 20:41	08/31/19 10:11	1
4-Bromofluorobenzene (Surr)	96			80 - 120			08/30/19 20:41	08/31/19 10:11	1
Dibromofluoromethane (Surr)	95			80 - 120			08/30/19 20:41	08/31/19 10:11	1
Toluene-d8 (Surr)	114			80 - 120			08/30/19 20:41	08/31/19 10:11	1
Trifluorotoluene (Surr)	114			80 - 120			08/30/19 20:41	08/31/19 10:11	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-01-SO
Date Collected: 08/20/19 16:15
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-11
Matrix: Solid
Percent Solids: 84.7

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		6.0	0.34	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
1,1,2,2-Tetrachloroethane	ND		12	1.6	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
1,1,2-Trichloroethane	ND *		6.0	0.55	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
1,1-Dichloroethene	ND *		6.0	0.74	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
1,2-Dibromoethane	ND		6.0	0.54	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
1,2-Dichloroethane	ND *		6.0	0.75	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
1,4-Dichlorobenzene	ND		6.0	0.38	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Benzene	ND *		6.0	0.50	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Bromodichloromethane	ND *		6.0	0.38	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Bromoform	ND		6.0	1.4	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Bromomethane	ND *		6.0	0.89	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Chloroform	ND *		6.0	0.36	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
cis-1,3-Dichloropropene	ND *		6.0	0.44	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Dibromochloromethane	ND		6.0	0.68	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Dibromomethane	ND *		6.0	0.71	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Hexachlorobutadiene	ND		6.0	0.79	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Naphthalene	3.0 JB		6.0	1.1	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Tetrachloroethene	ND		6.0	0.75	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
trans-1,3-Dichloropropene	ND *		6.0	0.41	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Trichloroethene	ND *		6.0	0.51	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1
Vinyl chloride	ND *		24	2.8	ug/Kg	✉	09/01/19 13:41	09/02/19 08:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	84		81 - 121	09/01/19 13:41	09/02/19 08:29	1
4-Bromofluorobenzene (Surr)	103		79 - 120	09/01/19 13:41	09/02/19 08:29	1
Dibromofluoromethane (Surr)	98		78 - 118	09/01/19 13:41	09/02/19 08:29	1
Toluene-d8 (Surr)	122 X		79 - 119	09/01/19 13:41	09/02/19 08:29	1
Trifluorotoluene (Surr)	107		52 - 152	09/01/19 13:41	09/02/19 08:29	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		55	13	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,1-Dichloroethane	ND		55	13	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,1-Dichloropropene	ND		55	7.2	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,2,3-Trichlorobenzene	ND		200	44	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,2,3-Trichloropropane	ND		55	16	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,2,4-Trichlorobenzene	ND		82	21	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,2,4-Trimethylbenzene	6200		55	18	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,2-Dibromo-3-Chloropropane	ND		340	21	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,2-Dichlorobenzene	ND		55	12	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,2-Dichloropropane	ND		27	9.0	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,3,5-Trimethylbenzene	1500		55	10	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,3-Dichlorobenzene	ND		82	18	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
1,3-Dichloropropane	ND		82	19	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
2,2-Dichloropropane	ND		55	17	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
2-Butanone	ND		820	250	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
2-Chlorotoluene	ND		55	12	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
4-Chlorotoluene	ND		55	13	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
4-Isopropyltoluene	560		55	14	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
4-Methyl-2-pentanone	ND *		550	110	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-01-SO
Date Collected: 08/20/19 16:15
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-11
Matrix: Solid
Percent Solids: 84.7

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	460	J B	1100	240	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Bromobenzene	ND		140	23	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Bromochloromethane	ND		55	8.5	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Carbon disulfide	ND		82	17	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Carbon tetrachloride	ND		27	11	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Chlorobenzene	ND		55	6.6	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Chloroethane	ND		550	14	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Chloromethane	ND		140	14	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
cis-1,2-Dichloroethene	ND		82	17	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Dichlorodifluoromethane	ND		270	63	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Ethylbenzene	96		55	12	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Isopropylbenzene	130		55	12	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Methyl tert-butyl ether	ND		55	8.2	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Methylene Chloride	ND		340	88	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
m-Xylene & p-Xylene	830		270	20	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
n-Butylbenzene	9300	E	200	11	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
n-Butylbenzene	ND	H	1900	100	ug/Kg	✉	09/11/19 08:00	09/12/19 06:22	1
N-Propylbenzene	310		55	9.4	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
o-Xylene	430		82	18	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
sec-Butylbenzene	ND		55	12	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Styrene	ND		55	8.3	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
t-Butylbenzene	ND		55	11	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Toluene	ND		200	18	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
trans-1,2-Dichloroethene	ND		82	20	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1
Trichlorofluoromethane	ND		270	16	ug/Kg	✉	08/30/19 20:41	08/31/19 15:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121	08/30/19 20:41	08/31/19 15:58	1
1,2-Dichloroethane-d4 (Surr)	104		80 - 121	09/11/19 08:00	09/12/19 06:22	1
4-Bromofluorobenzene (Surr)	95		80 - 120	08/30/19 20:41	08/31/19 15:58	1
4-Bromofluorobenzene (Surr)	99		80 - 120	09/11/19 08:00	09/12/19 06:22	1
Dibromofluoromethane (Surr)	96		80 - 120	08/30/19 20:41	08/31/19 15:58	1
Dibromofluoromethane (Surr)	100		80 - 120	09/11/19 08:00	09/12/19 06:22	1
Toluene-d8 (Surr)	116		80 - 120	08/30/19 20:41	08/31/19 15:58	1
Toluene-d8 (Surr)	108		80 - 120	09/11/19 08:00	09/12/19 06:22	1
Trifluorotoluene (Surr)	113		80 - 120	08/30/19 20:41	08/31/19 15:58	1
Trifluorotoluene (Surr)	97		80 - 120	09/11/19 08:00	09/12/19 06:22	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		12	4.8	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
2,4-Dinitrophenol	ND	F2	170	35	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
2,4-Dinitrotoluene	ND		23	4.6	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
2,6-Dinitrotoluene	ND		12	3.6	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
3,3'-Dichlorobenzidine	ND	F1	12	5.1	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
4-Chloroaniline	ND	F1	170	56	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
Bis(2-chloroethyl)ether	ND		12	3.6	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
Hexachlorobenzene	ND		12	4.3	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
Hexachlorobutadiene	ND		12	2.3	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
Hexachlorocyclopentadiene	ND		12	4.1	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-01-SO

Lab Sample ID: 580-88695-11

Date Collected: 08/20/19 16:15
Date Received: 08/26/19 12:25

Matrix: Solid

Percent Solids: 84.7

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachloroethane	ND		12	3.5	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
Nitrobenzene	ND		12	3.6	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
N-Nitrosodimethylamine	ND		23	5.4	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
N-Nitrosodi-n-propylamine	ND		12	4.3	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
Pentachlorophenol	ND		350	110	ug/Kg	✉	09/03/19 09:39	09/04/19 12:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	74		28 - 143				09/03/19 09:39	09/04/19 12:45	1
2-Fluorobiphenyl	93		42 - 140				09/03/19 09:39	09/04/19 12:45	1
Nitrobenzene-d5	88		38 - 141				09/03/19 09:39	09/04/19 12:45	1
Terphenyl-d14	95		68 - 138				09/03/19 09:39	09/04/19 12:45	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		58	7.0	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
1,2-Dichlorobenzene	ND		58	14	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
1,3-Dichlorobenzene	ND		58	5.6	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
1,4-Dichlorobenzene	ND		58	9.7	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
1-Methylnaphthalene	ND		35	5.8	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
2,4,5-Trichlorophenol	ND		230	52	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
2,4-Dichlorophenol	ND		120	17	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
2,4-Dimethylphenol	ND		120	17	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
2-Chloronaphthalene	ND		29	5.8	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
2-Chlorophenol	ND		230	15	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
2-Methylnaphthalene	ND		58	10	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
2-Methylphenol	ND		170	11	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
2-Nitroaniline	ND		120	17	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
2-Nitrophenol	ND		230	24	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
3 & 4 Methylphenol	ND		230	17	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
3-Nitroaniline	ND		230	47	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
4,6-Dinitro-2-methylphenol	ND	F2	1200	120	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
4-Bromophenyl phenyl ether	ND		230	11	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
4-Chloro-3-methylphenol	ND		170	38	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
4-Chlorophenyl phenyl ether	ND		230	7.3	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
4-Nitroaniline	ND	F2	170	58	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
4-Nitrophenol	ND		1700	430	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Acenaphthene	ND		29	5.8	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Acenaphthylene	ND		29	5.8	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Anthracene	ND		29	5.8	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Benzo[a]anthracene	ND		29	5.8	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Benzo[a]pyrene	ND		70	15	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Benzo[b]fluoranthene	ND		29	5.8	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Benzo[g,h,i]perylene	ND		70	10	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Benzo[k]fluoranthene	ND		70	16	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Benzoic acid	ND	F1	2300	680	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Benzyl alcohol	ND	F1 *	580	90	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Bis(2-chloroethoxy)methane	ND		230	21	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Bis(2-ethylhexyl) phthalate	ND		700	83	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
bis(chloroisopropyl) ether	ND		230	16	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Butyl benzyl phthalate	66	J B	230	59	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-01-SO
Date Collected: 08/20/19 16:15
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-11
Matrix: Solid
Percent Solids: 84.7

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbazole	ND	F1 *	170	9.6	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Chrysene	ND		70	15	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Dibenz(a,h)anthracene	ND		58	14	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Dibenzofuran	ND		170	6.9	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Diethyl phthalate	ND		1700	89	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Dimethyl phthalate	ND		170	15	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Di-n-butyl phthalate	ND		580	66	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Di-n-octyl phthalate	ND		170	66	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Fluoranthene	ND		29	5.8	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Fluorene	ND		29	5.8	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Indeno[1,2,3-cd]pyrene	ND		47	5.8	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Isophorone	ND		170	8.6	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Naphthalene	ND		29	5.8	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
N-Nitrosodiphenylamine	ND		70	9.3	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Phenanthrene	ND		70	14	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Phenol	ND		170	27	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Pyrene	ND		70	7.5	ug/Kg	✉	09/03/19 09:39	09/05/19 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	92		52 - 125				09/03/19 09:39	09/05/19 16:48	1
2-Fluorobiphenyl	96		57 - 120				09/03/19 09:39	09/05/19 16:48	1
2-Fluorophenol (Surr)	102		60 - 125				09/03/19 09:39	09/05/19 16:48	1
Nitrobenzene-d5 (Surr)	105		62 - 120				09/03/19 09:39	09/05/19 16:48	1
Phenol-d5 (Surr)	96		59 - 120				09/03/19 09:39	09/05/19 16:48	1
Terphenyl-d14 (Surr)	102		58 - 120				09/03/19 09:39	09/05/19 16:48	1

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.34	0.075	ug/Kg	✉	09/03/19 12:34	09/06/19 18:09	1
Ethylene Dibromide	ND		0.057	0.014	ug/Kg	✉	09/03/19 12:34	09/06/19 18:09	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	60		60 - 140				09/03/19 12:34	09/06/19 18:09	1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	12		12	3.9	mg/Kg	✉	09/03/19 11:22	09/04/19 00:02	1
Residual Range Organics (RRO) (C25-C36)	99		23	5.8	mg/Kg	✉	09/03/19 11:22	09/04/19 00:02	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	88		50 - 150				09/03/19 11:22	09/04/19 00:02	1
n-Triaccontane-d62	97		50 - 150				09/03/19 11:22	09/04/19 00:02	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16	B	0.22	0.045	mg/Kg	✉	09/06/19 10:17	09/10/19 18:42	5
Barium	150		0.45	0.10	mg/Kg	✉	09/06/19 10:17	09/10/19 18:42	5
Cadmium	0.25		0.18	0.035	mg/Kg	✉	09/06/19 10:17	09/10/19 18:42	5
Chromium	40	B	0.22	0.028	mg/Kg	✉	09/06/19 10:17	09/10/19 18:42	5

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-01-SO

Lab Sample ID: 580-88695-11

Date Collected: 08/20/19 16:15
 Date Received: 08/26/19 12:25

Matrix: Solid

Percent Solids: 84.7

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	13		0.22	0.022	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:42	5
Selenium	0.86	B	0.49	0.13	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:42	5
Silver	0.14		0.090	0.0090	mg/Kg	⊗	09/06/19 10:17	09/10/19 18:42	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.065		0.028	0.0085	mg/Kg	⊗	09/09/19 10:05	09/09/19 15:16	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.7		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	15.3		0.1	0.1	%			08/30/19 14:26	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-02-SO
Date Collected: 08/20/19 15:28
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-12
Matrix: Solid
Percent Solids: 78.0

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		7.3	0.41	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
1,1,2,2-Tetrachloroethane	ND		15	2.0	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
1,1,2-Trichloroethane	ND *		7.3	0.67	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
1,1-Dichloroethene	ND *		7.3	0.90	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
1,2-Dibromoethane	ND		7.3	0.65	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
1,2-Dichloroethane	ND *		7.3	0.92	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
1,4-Dichlorobenzene	ND		7.3	0.47	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Benzene	ND *		7.3	0.61	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Bromodichloromethane	ND *		7.3	0.46	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Bromoform	ND		7.3	1.6	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Bromomethane	ND *		7.3	1.1	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Chloroform	ND *		7.3	0.44	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
cis-1,3-Dichloropropene	ND *		7.3	0.54	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Dibromochloromethane	ND		7.3	0.83	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Dibromomethane	ND *		7.3	0.86	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Hexachlorobutadiene	ND		7.3	0.96	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Naphthalene	21 B		7.3	1.3	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Tetrachloroethene	ND		7.3	0.92	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
trans-1,3-Dichloropropene	ND *		7.3	0.49	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Trichloroethene	ND *		7.3	0.62	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1
Vinyl chloride	ND *		29	3.4	ug/Kg	✉	09/01/19 13:41	09/02/19 08:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	122	X	81 - 121	09/01/19 13:41	09/02/19 08:56	1
4-Bromofluorobenzene (Surr)	91		79 - 120	09/01/19 13:41	09/02/19 08:56	1
Dibromofluoromethane (Surr)	124	X	78 - 118	09/01/19 13:41	09/02/19 08:56	1
Toluene-d8 (Surr)	96		79 - 119	09/01/19 13:41	09/02/19 08:56	1
Trifluorotoluene (Surr)	110		52 - 152	09/01/19 13:41	09/02/19 08:56	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		59	14	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,1-Dichloroethane	ND		59	13	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,1-Dichloropropene	ND		59	7.8	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,2,3-Trichlorobenzene	ND		220	47	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,2,3-Trichloropropane	ND		59	17	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,2,4-Trichlorobenzene	ND		88	23	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,2,4-Trimethylbenzene	660		59	20	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,2-Dibromo-3-Chloropropane	ND		370	22	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,2-Dichlorobenzene	ND		59	13	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,2-Dichloropropane	ND		29	9.7	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,3,5-Trimethylbenzene	190		59	11	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,3-Dichlorobenzene	ND		88	19	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
1,3-Dichloropropane	ND		88	20	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
2,2-Dichloropropane	ND		59	18	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
2-Butanone	ND		880	270	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
2-Chlorotoluene	ND		59	13	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
4-Chlorotoluene	ND		59	14	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
4-Isopropyltoluene	62		59	15	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1
4-Methyl-2-pentanone	ND *		590	120	ug/Kg	✉	08/30/19 20:41	08/31/19 16:23	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-02-SO
Date Collected: 08/20/19 15:28
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-12
Matrix: Solid
Percent Solids: 78.0

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	580	J B	1200	250	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Bromobenzene	ND		150	25	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Bromochloromethane	ND		59	9.1	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Carbon disulfide	ND		88	18	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Carbon tetrachloride	ND		29	12	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Chlorobenzene	ND		59	7.0	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Chloroethane	ND		590	15	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Chloromethane	ND		150	15	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
cis-1,2-Dichloroethene	ND		88	18	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Dichlorodifluoromethane	ND		290	67	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Ethylbenzene	20	J	59	13	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Isopropylbenzene	18	J	59	13	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Methyl tert-butyl ether	ND		59	8.8	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Methylene Chloride	ND		370	95	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
m-Xylene & p-Xylene	130	J	290	22	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
N-Propylbenzene	44	J	59	10	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
o-Xylene	56	J	88	20	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
sec-Butylbenzene	48	J	59	13	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Styrene	ND		59	8.9	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
t-Butylbenzene	ND		59	11	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Toluene	ND		220	20	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
trans-1,2-Dichloroethene	ND		88	21	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1
Trichlorofluoromethane	ND		290	17	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		80 - 121	08/30/19 20:41	08/31/19 16:23	1
4-Bromofluorobenzene (Surr)	98		80 - 120	08/30/19 20:41	08/31/19 16:23	1
Dibromofluoromethane (Surr)	93		80 - 120	08/30/19 20:41	08/31/19 16:23	1
Toluene-d8 (Surr)	106		80 - 120	08/30/19 20:41	08/31/19 16:23	1
Trifluorotoluene (Surr)	113		80 - 120	08/30/19 20:41	08/31/19 16:23	1

Method: 8260C - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND	H	220	12	ug/Kg	⊗	09/11/19 08:00	09/12/19 06:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	105		80 - 121				09/11/19 08:00	09/12/19 06:47	1
4-Bromofluorobenzene (Surr)	102		80 - 120				09/11/19 08:00	09/12/19 06:47	1
Dibromofluoromethane (Surr)	100		80 - 120				09/11/19 08:00	09/12/19 06:47	1
Toluene-d8 (Surr)	107		80 - 120				09/11/19 08:00	09/12/19 06:47	1
Trifluorotoluene (Surr)	114		80 - 120				09/11/19 08:00	09/12/19 06:47	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		12	5.0	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
2,4-Dinitrophenol	ND		180	36	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
2,4-Dinitrotoluene	ND		24	4.7	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
2,6-Dinitrotoluene	ND		12	3.7	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
3,3'-Dichlorobenzidine	ND		12	5.2	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
4-Chloroaniline	ND		180	58	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-02-SO
Date Collected: 08/20/19 15:28
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-12
Matrix: Solid
Percent Solids: 78.0

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		12	3.7	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
Hexachlorobenzene	ND		12	4.4	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
Hexachlorobutadiene	ND		12	2.3	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
Hexachlorocyclopentadiene	ND		12	4.2	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
Hexachloroethane	ND		12	3.6	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
Nitrobenzene	ND		12	3.7	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
N-Nitrosodimethylamine	ND		24	5.5	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
N-Nitrosodi-n-propylamine	ND		12	4.4	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
Pentachlorophenol	110 J		360	110	ug/Kg	⊗	09/03/19 09:39	09/04/19 13:54	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	74			28 - 143			09/03/19 09:39	09/04/19 13:54	1
2-Fluorobiphenyl	88			42 - 140			09/03/19 09:39	09/04/19 13:54	1
Nitrobenzene-d5	85			38 - 141			09/03/19 09:39	09/04/19 13:54	1
Terphenyl-d14	90			68 - 138			09/03/19 09:39	09/04/19 13:54	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		60	7.2	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
1,2-Dichlorobenzene	ND		60	14	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
1,3-Dichlorobenzene	ND		60	5.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
1,4-Dichlorobenzene	ND		60	10	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
1-Methylnaphthalene	7.2 J		36	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
2,4,5-Trichlorophenol	ND		240	54	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
2,4-Dichlorophenol	ND		120	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
2,4-Dimethylphenol	ND		120	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
2-Chloronaphthalene	ND		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
2-Chlorophenol	ND		240	16	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
2-Methylnaphthalene	13 J		60	11	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
2-Methylphenol	ND		180	12	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
2-Nitroaniline	ND		120	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
2-Nitrophenol	ND		240	25	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
3 & 4 Methylphenol	ND		240	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
3-Nitroaniline	ND		240	48	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
4,6-Dinitro-2-methylphenol	ND		1200	120	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
4-Bromophenyl phenyl ether	ND		240	11	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
4-Chloro-3-methylphenol	ND		180	40	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
4-Chlorophenyl phenyl ether	ND		240	7.6	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
4-Nitroaniline	ND		180	60	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
4-Nitrophenol	ND		1800	440	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
Acenaphthene	ND		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
Acenaphthylene	7.6 J		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
Anthracene	18 J		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
Benzo[a]anthracene	9.3 J		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
Benzo[a]pyrene	ND		72	16	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
Benzo[b]fluoranthene	23 J		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
Benzo[g,h,i]perylene	ND		72	11	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
Benzo[k]fluoranthene	ND		72	17	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
Benzoic acid	970 J		2400	700	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1
Benzyl alcohol	ND *		600	93	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:00	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-02-SO
Date Collected: 08/20/19 15:28
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-12
Matrix: Solid
Percent Solids: 78.0

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	ND		240	22	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Bis(2-ethylhexyl) phthalate	160	J	720	85	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
bis(chloroisopropyl) ether	ND		240	17	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Butyl benzyl phthalate	110	J B	240	61	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Carbazole	ND *		180	9.9	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Chrysene	32	J	72	16	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Dibenz(a,h)anthracene	ND		60	14	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Dibenzofuran	ND		180	7.1	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Diethyl phthalate	ND		1800	91	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Dimethyl phthalate	ND		180	16	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Di-n-butyl phthalate	ND		600	68	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Di-n-octyl phthalate	ND		180	68	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Fluoranthene	44		30	6.0	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Fluorene	ND		30	6.0	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Indeno[1,2,3-cd]pyrene	ND		48	6.0	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Isophorone	ND		180	8.9	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Naphthalene	7.3	J	30	6.0	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
N-Nitrosodiphenylamine	ND		72	9.6	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Phenanthrene	14	J	72	14	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Phenol	ND		180	28	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Pyrene	29	J	72	7.7	ug/Kg	✉	09/03/19 09:39	09/05/19 18:00	1
Surrogate	%Recovery	Qualifier			Limits				
2,4,6-Tribromophenol (Surr)	87				52 - 125				
2-Fluorobiphenyl	84				57 - 120				
2-Fluorophenol (Surr)	98				60 - 125				
Nitrobenzene-d5 (Surr)	101				62 - 120				
Phenol-d5 (Surr)	96				59 - 120				
Terphenyl-d14 (Surr)	96				58 - 120				
							Prepared	Analyzed	Dil Fac
							09/03/19 09:39	09/05/19 18:00	1
							09/03/19 09:39	09/05/19 18:00	1
							09/03/19 09:39	09/05/19 18:00	1
							09/03/19 09:39	09/05/19 18:00	1
							09/03/19 09:39	09/05/19 18:00	1
							09/03/19 09:39	09/05/19 18:00	1
							09/03/19 09:39	09/05/19 18:00	1
							09/03/19 09:39	09/05/19 18:00	1

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.38	0.083	ug/Kg	✉	09/03/19 12:34	09/06/19 18:25	1
Ethylene Dibromide	ND		0.063	0.015	ug/Kg	✉	09/03/19 12:34	09/06/19 18:25	1
Surrogate	%Recovery	Qualifier			Limits				
1,2-Dibromopropane	35	X			60 - 140				
							Prepared	Analyzed	Dil Fac
							09/03/19 12:34	09/06/19 18:25	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 15:00	1
PCB-1221	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 15:00	1
PCB-1232	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 15:00	1
PCB-1242	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 15:00	1
PCB-1248	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 15:00	1
PCB-1254	17		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 15:00	1
PCB-1260	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 15:00	1
PCB-1268	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 15:00	1
PCB-1262	ND		12	2.7	ug/Kg	✉	09/06/19 08:42	09/09/19 15:00	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-02-SO

Lab Sample ID: 580-88695-12

Date Collected: 08/20/19 15:28
Date Received: 08/26/19 12:25

Matrix: Solid

Percent Solids: 78.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	48	p	31 - 142	09/06/19 08:42	09/09/19 15:00	1
DCB Decachlorobiphenyl (Surr)	97		20 - 150	09/06/19 08:42	09/09/19 15:00	1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	180		13	4.3	mg/Kg	⌚	09/03/19 11:22	09/04/19 00:21	1
Residual Range Organics (RRO) (C25-C36)	1000		25	6.3	mg/Kg	⌚	09/03/19 11:22	09/04/19 00:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	94		50 - 150				09/03/19 11:22	09/04/19 00:21	1
<i>n</i> -Triaccontane-d62	96		50 - 150				09/03/19 11:22	09/04/19 00:21	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		0.21	0.041	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:05	5
Barium	180		0.41	0.094	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:05	5
Cadmium	1.1		0.17	0.032	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:05	5
Chromium	24		0.21	0.026	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:05	5
Lead	110	B	0.21	0.020	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:05	5
Selenium	1.2		0.46	0.12	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:05	5
Silver	0.22		0.083	0.0083	mg/Kg	⌚	09/06/19 13:00	09/11/19 19:32	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11		0.031	0.0093	mg/Kg	⌚	09/09/19 10:05	09/09/19 15:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.0		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	22.0		0.1	0.1	%			08/30/19 14:26	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-03-SO
Date Collected: 08/20/19 15:38
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-13
Matrix: Solid
Percent Solids: 70.6

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	9.5	0.53	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
1,1,2,2-Tetrachloroethane	ND	H	19	2.6	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
1,1,2-Trichloroethane	ND	H	9.5	0.87	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
1,1-Dichloroethene	ND	H	9.5	1.2	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
1,2-Dibromoethane	ND	H	9.5	0.85	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
1,2-Dichloroethane	ND	H *	9.5	1.2	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
1,4-Dichlorobenzene	ND	H	9.5	0.61	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Benzene	ND	H	9.5	0.79	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Bromodichloromethane	ND	H	9.5	0.60	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Bromoform	ND	H *	9.5	2.1	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Bromomethane	ND	H	9.5	1.4	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Chloroform	ND	H	9.5	0.57	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
cis-1,3-Dichloropropene	ND	H	9.5	0.70	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Dibromochloromethane	ND	H	9.5	1.1	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Dibromomethane	ND	H	9.5	1.1	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Hexachlorobutadiene	ND	H	9.5	1.2	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Naphthalene	2.5	J H	9.5	1.7	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Tetrachloroethene	ND	H	9.5	1.2	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
trans-1,3-Dichloropropene	ND	H	9.5	0.64	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Trichloroethene	ND	H	9.5	0.81	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1
Vinyl chloride	ND	H *	38	4.5	ug/Kg	✉	09/03/19 17:49	09/04/19 14:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	136	X	81 - 121	09/03/19 17:49	09/04/19 14:08	1
4-Bromofluorobenzene (Surr)	113		79 - 120	09/03/19 17:49	09/04/19 14:08	1
Dibromofluoromethane (Surr)	116		78 - 118	09/03/19 17:49	09/04/19 14:08	1
Toluene-d8 (Surr)	99		79 - 119	09/03/19 17:49	09/04/19 14:08	1
Trifluorotoluene (Surr)	96		52 - 152	09/03/19 17:49	09/04/19 14:08	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		76	18	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,1-Dichloroethane	ND		76	17	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,1-Dichloropropene	ND		76	10	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,2,3-Trichlorobenzene	ND		280	61	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,2,3-Trichloropropane	ND		76	22	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,2,4-Trichlorobenzene	ND		110	29	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,2,4-Trimethylbenzene	390		76	26	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,2-Dibromo-3-Chloropropane	ND		470	29	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,2-Dichlorobenzene	ND		76	16	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,2-Dichloropropane	ND		38	12	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,3,5-Trimethylbenzene	120		76	14	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,3-Dichlorobenzene	ND		110	25	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
1,3-Dichloropropane	ND		110	26	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
2,2-Dichloropropane	ND		76	23	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
2-Butanone	ND		1100	350	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
2-Chlorotoluene	ND		76	17	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
4-Chlorotoluene	ND		76	19	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
4-Isopropyltoluene	38	J	76	19	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1
4-Methyl-2-pentanone	ND	*	760	150	ug/Kg	✉	08/30/19 20:41	08/31/19 16:48	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-03-SO
Date Collected: 08/20/19 15:38
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-13
Matrix: Solid
Percent Solids: 70.6

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	730	J B	1500	330	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Bromobenzene	ND		190	32	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Bromochloromethane	ND		76	12	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Carbon disulfide	ND		110	23	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Carbon tetrachloride	ND		38	15	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Chlorobenzene	ND		76	9.1	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Chloroethane	ND		760	19	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Chloromethane	ND		190	19	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
cis-1,2-Dichloroethene	ND		110	24	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Dichlorodifluoromethane	ND		380	87	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Ethylbenzene	17	J	76	17	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Isopropylbenzene	ND		76	16	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Methyl tert-butyl ether	ND		76	11	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Methylene Chloride	ND		470	120	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
m-Xylene & p-Xylene	110	J	380	28	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
N-Propylbenzene	31	J	76	13	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
o-Xylene	40	J	110	25	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
sec-Butylbenzene	31	J	76	16	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Styrene	ND		76	12	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
t-Butylbenzene	ND		76	15	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Toluene	ND		280	26	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
trans-1,2-Dichloroethene	ND		110	28	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Trichlorofluoromethane	ND		380	22	ug/Kg	⊗	08/30/19 20:41	08/31/19 16:48	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		80 - 121				08/30/19 20:41	08/31/19 16:48	1
4-Bromofluorobenzene (Surr)	100		80 - 120				08/30/19 20:41	08/31/19 16:48	1
Dibromofluoromethane (Surr)	99		80 - 120				08/30/19 20:41	08/31/19 16:48	1
Toluene-d8 (Surr)	107		80 - 120				08/30/19 20:41	08/31/19 16:48	1
Trifluorotoluene (Surr)	109		80 - 120				08/30/19 20:41	08/31/19 16:48	1

Method: 8260C - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND	H	280	15	ug/Kg	⊗	09/11/19 08:00	09/12/19 07:12	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		80 - 121				09/11/19 08:00	09/12/19 07:12	1
4-Bromofluorobenzene (Surr)	98		80 - 120				09/11/19 08:00	09/12/19 07:12	1
Dibromofluoromethane (Surr)	100		80 - 120				09/11/19 08:00	09/12/19 07:12	1
Toluene-d8 (Surr)	106		80 - 120				09/11/19 08:00	09/12/19 07:12	1
Trifluorotoluene (Surr)	96		80 - 120				09/11/19 08:00	09/12/19 07:12	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		14	5.6	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
2,4-Dinitrophenol	ND		200	41	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
2,4-Dinitrotoluene	ND		27	5.4	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
2,6-Dinitrotoluene	ND		14	4.2	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
3,3'-Dichlorobenzidine	ND		14	5.9	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
4-Chloroaniline	ND		200	66	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-03-SO
Date Collected: 08/20/19 15:38
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-13
Matrix: Solid
Percent Solids: 70.6

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		14	4.2	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
Hexachlorobenzene	ND		14	5.0	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
Hexachlorobutadiene	ND		14	2.7	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
Hexachlorocyclopentadiene	ND		14	4.8	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
Hexachloroethane	ND		14	4.1	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
Nitrobenzene	ND		14	4.2	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
N-Nitrosodimethylamine	ND		27	6.3	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
N-Nitrosodi-n-propylamine	ND		14	5.0	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
Pentachlorophenol	ND		410	120	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:17	1
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol		85		28 - 143			09/03/19 09:39	09/04/19 14:17	1
2-Fluorobiphenyl		94		42 - 140			09/03/19 09:39	09/04/19 14:17	1
Nitrobenzene-d5		85		38 - 141			09/03/19 09:39	09/04/19 14:17	1
Terphenyl-d14		103		68 - 138			09/03/19 09:39	09/04/19 14:17	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		68	8.2	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
1,2-Dichlorobenzene	ND		68	16	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
1,3-Dichlorobenzene	ND		68	6.6	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
1,4-Dichlorobenzene	ND		68	11	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
1-Methylnaphthalene	ND		41	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
2,4,5-Trichlorophenol	ND		270	61	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
2,4-Dichlorophenol	ND		140	20	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
2,4-Dimethylphenol	ND		140	20	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
2-Chloronaphthalene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
2-Chlorophenol	ND		270	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
2-Methylnaphthalene	ND		68	12	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
2-Methylphenol	ND		200	13	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
2-Nitroaniline	ND		140	20	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
2-Nitrophenol	ND		270	29	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
3 & 4 Methylphenol	ND		270	20	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
3-Nitroaniline	ND		270	55	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
4,6-Dinitro-2-methylphenol	ND		1400	140	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
4-Bromophenyl phenyl ether	ND		270	12	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
4-Chloro-3-methylphenol	ND		200	45	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
4-Chlorophenyl phenyl ether	ND		270	8.6	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
4-Nitroaniline	ND		200	68	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
4-Nitrophenol	ND		2000	500	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Acenaphthene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Acenaphthylene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Anthracene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Benzo[a]anthracene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Benzo[a]pyrene	ND		82	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Benzo[b]fluoranthene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Benzo[g,h,i]perylene	ND		82	12	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Benzo[k]fluoranthene	ND		82	19	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Benzoic acid	1100 J		2700	790	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Benzyl alcohol	ND *		680	110	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-03-SO
Date Collected: 08/20/19 15:38
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-13
Matrix: Solid
Percent Solids: 70.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	ND		270	25	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Bis(2-ethylhexyl) phthalate	ND		820	97	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
bis(chloroisopropyl) ether	ND		270	19	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Butyl benzyl phthalate	ND		270	70	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Carbazole	ND *		200	11	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Chrysene	ND		82	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Dibenz(a,h)anthracene	ND		68	16	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Dibenzofuran	ND		200	8.1	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Diethyl phthalate	ND		2000	100	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Dimethyl phthalate	ND		200	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Di-n-butyl phthalate	82 J		680	78	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Di-n-octyl phthalate	ND		200	78	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Fluoranthene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Fluorene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Indeno[1,2,3-cd]pyrene	ND		55	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Isophorone	ND		200	10	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Naphthalene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
N-Nitrosodiphenylamine	ND		82	11	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Phenanthrene	ND		82	16	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Phenol	ND		200	31	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Pyrene	ND		82	8.7	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:23	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	98		52 - 125				09/03/19 09:39	09/05/19 18:23	1
2-Fluorobiphenyl	91		57 - 120				09/03/19 09:39	09/05/19 18:23	1
2-Fluorophenol (Surr)	96		60 - 125				09/03/19 09:39	09/05/19 18:23	1
Nitrobenzene-d5 (Surr)	100		62 - 120				09/03/19 09:39	09/05/19 18:23	1
Phenol-d5 (Surr)	90		59 - 120				09/03/19 09:39	09/05/19 18:23	1
Terphenyl-d14 (Surr)	99		58 - 120				09/03/19 09:39	09/05/19 18:23	1

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.39	0.086	ug/Kg	⊗	09/03/19 12:34	09/06/19 18:41	1
Ethylene Dibromide	ND		0.065	0.016	ug/Kg	⊗	09/03/19 12:34	09/06/19 18:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	39	X	60 - 140				09/03/19 12:34	09/06/19 18:41	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		14	3.0	ug/Kg	⊗	09/06/19 08:42	09/09/19 15:20	1
PCB-1221	ND		14	3.0	ug/Kg	⊗	09/06/19 08:42	09/09/19 15:20	1
PCB-1232	ND		14	3.0	ug/Kg	⊗	09/06/19 08:42	09/09/19 15:20	1
PCB-1242	ND		14	3.0	ug/Kg	⊗	09/06/19 08:42	09/09/19 15:20	1
PCB-1248	ND		14	3.0	ug/Kg	⊗	09/06/19 08:42	09/09/19 15:20	1
PCB-1254	13 J		14	3.0	ug/Kg	⊗	09/06/19 08:42	09/09/19 15:20	1
PCB-1260	ND		14	3.0	ug/Kg	⊗	09/06/19 08:42	09/09/19 15:20	1
PCB-1268	ND		14	3.0	ug/Kg	⊗	09/06/19 08:42	09/09/19 15:20	1
PCB-1262	ND		14	3.0	ug/Kg	⊗	09/06/19 08:42	09/09/19 15:20	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-03-SO

Lab Sample ID: 580-88695-13

Date Collected: 08/20/19 15:38
Date Received: 08/26/19 12:25

Matrix: Solid

Percent Solids: 70.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	47	p	31 - 142	09/06/19 08:42	09/09/19 15:20	1
DCB Decachlorobiphenyl (Surr)	95		20 - 150	09/06/19 08:42	09/09/19 15:20	1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	47		14	4.7	mg/Kg	⌚	09/03/19 11:22	09/04/19 00:41	1
Residual Range Organics (RRO) (C25-C36)	350		28	6.9	mg/Kg	⌚	09/03/19 11:22	09/04/19 00:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	93		50 - 150				09/03/19 11:22	09/04/19 00:41	1
<i>n</i> -Triaccontane-d62	102		50 - 150				09/03/19 11:22	09/04/19 00:41	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	20		0.23	0.046	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:10	5
Barium	190		0.46	0.11	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:10	5
Cadmium	0.76		0.19	0.036	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:10	5
Chromium	27		0.23	0.029	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:10	5
Lead	28	B	0.23	0.022	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:10	5
Selenium	1.7		0.51	0.13	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:10	5
Silver	0.20		0.093	0.0093	mg/Kg	⌚	09/06/19 13:00	09/11/19 19:36	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.11		0.035	0.010	mg/Kg	⌚	09/09/19 10:05	09/09/19 15:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	70.6		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	29.4		0.1	0.1	%			08/30/19 14:26	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-04-SO
Date Collected: 08/20/19 15:43
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-14
Matrix: Solid
Percent Solids: 72.6

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	8.0	0.45	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
1,1,2,2-Tetrachloroethane	ND	H	16	2.2	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
1,1,2-Trichloroethane	ND	H	8.0	0.74	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
1,1-Dichloroethene	ND	H	8.0	1.0	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
1,2-Dibromoethane	ND	H	8.0	0.72	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
1,2-Dichloroethane	ND	H *	8.0	1.0	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
1,4-Dichlorobenzene	ND	H	8.0	0.51	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Benzene	ND	H	8.0	0.68	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Bromodichloromethane	ND	H	8.0	0.51	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Bromoform	ND	H *	8.0	1.8	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Bromomethane	ND	H	8.0	1.2	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Chloroform	ND	H	8.0	0.48	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
cis-1,3-Dichloropropene	ND	H	8.0	0.59	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Dibromochloromethane	ND	H	8.0	0.92	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Dibromomethane	ND	H	8.0	0.95	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Hexachlorobutadiene	ND	H	8.0	1.1	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Naphthalene	2.0	J H	8.0	1.5	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Tetrachloroethene	ND	H	8.0	1.0	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
trans-1,3-Dichloropropene	ND	H	8.0	0.55	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Trichloroethene	ND	H	8.0	0.69	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Vinyl chloride	ND	H *	32	3.8	ug/Kg	✉	09/03/19 17:49	09/04/19 14:34	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	126	X		81 - 121			09/03/19 17:49	09/04/19 14:34	1
4-Bromofluorobenzene (Surr)	105			79 - 120			09/03/19 17:49	09/04/19 14:34	1
Dibromofluoromethane (Surr)	84			78 - 118			09/03/19 17:49	09/04/19 14:34	1
Toluene-d8 (Surr)	106			79 - 119			09/03/19 17:49	09/04/19 14:34	1
Trifluorotoluene (Surr)	92			52 - 152			09/03/19 17:49	09/04/19 14:34	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		64	15	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,1-Dichloroethane	ND		64	15	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,1-Dichloropropene	ND		64	8.5	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,2,3-Trichlorobenzene	ND		240	52	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,2,3-Trichloropropane	ND		64	18	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,2,4-Trichlorobenzene	ND		96	25	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,2,4-Trimethylbenzene	210		64	22	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,2-Dibromo-3-Chloropropane	ND		400	24	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,2-Dichlorobenzene	ND		64	14	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,2-Dichloropropane	ND		32	11	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,3,5-Trimethylbenzene	65		64	12	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,3-Dichlorobenzene	ND		96	21	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
1,3-Dichloropropane	ND		96	22	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
2,2-Dichloropropane	ND		64	19	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
2-Butanone	ND		960	300	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
2-Chlorotoluene	ND		64	14	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
4-Chlorotoluene	ND		64	16	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
4-Isopropyltoluene	21 J		64	16	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1
4-Methyl-2-pentanone	ND *		640	130	ug/Kg	✉	08/30/19 20:41	08/31/19 17:14	1

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Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-04-SO
Date Collected: 08/20/19 15:43
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-14
Matrix: Solid
Percent Solids: 72.6

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	440	J B	1300	280	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Bromobenzene	ND		160	27	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Bromochloromethane	ND		64	10	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Carbon disulfide	ND		96	19	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Carbon tetrachloride	ND		32	13	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Chlorobenzene	ND		64	7.7	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Chloroethane	ND		640	16	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Chloromethane	ND		160	16	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
cis-1,2-Dichloroethene	ND		96	20	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Dichlorodifluoromethane	ND		320	74	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Ethylbenzene	ND		64	15	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Isopropylbenzene	ND		64	14	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Methyl tert-butyl ether	ND		64	9.6	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Methylene Chloride	ND		400	100	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
m-Xylene & p-Xylene	74	J	320	24	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
N-Propylbenzene	20	J	64	11	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
o-Xylene	28	J	96	22	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
sec-Butylbenzene	ND		64	14	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Styrene	ND		64	9.8	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
t-Butylbenzene	ND		64	12	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Toluene	ND		240	22	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
trans-1,2-Dichloroethene	ND		96	23	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1
Trichlorofluoromethane	ND		320	18	ug/Kg	⊗	08/30/19 20:41	08/31/19 17:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		80 - 121	08/30/19 20:41	08/31/19 17:14	1
4-Bromofluorobenzene (Surr)	95		80 - 120	08/30/19 20:41	08/31/19 17:14	1
Dibromofluoromethane (Surr)	95		80 - 120	08/30/19 20:41	08/31/19 17:14	1
Toluene-d8 (Surr)	113		80 - 120	08/30/19 20:41	08/31/19 17:14	1
Trifluorotoluene (Surr)	97		80 - 120	08/30/19 20:41	08/31/19 17:14	1

Method: 8260C - Volatile Organic Compounds by GC/MS - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND	H	240	13	ug/Kg	⊗	09/11/19 08:00	09/12/19 07:37	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	107		80 - 121	09/11/19 08:00	09/12/19 07:37	1			
4-Bromofluorobenzene (Surr)	98		80 - 120	09/11/19 08:00	09/12/19 07:37	1			
Dibromofluoromethane (Surr)	101		80 - 120	09/11/19 08:00	09/12/19 07:37	1			
Toluene-d8 (Surr)	108		80 - 120	09/11/19 08:00	09/12/19 07:37	1			
Trifluorotoluene (Surr)	94		80 - 120	09/11/19 08:00	09/12/19 07:37	1			

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		14	5.6	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
2,4-Dinitrophenol	ND		200	41	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
2,4-Dinitrotoluene	ND		27	5.4	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
2,6-Dinitrotoluene	ND		14	4.2	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
3,3'-Dichlorobenzidine	ND		14	5.9	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
4-Chloroaniline	ND		200	66	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-04-SO
Date Collected: 08/20/19 15:43
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-14
Matrix: Solid
Percent Solids: 72.6

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethyl)ether	ND		14	4.2	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
Hexachlorobenzene	ND		14	5.0	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
Hexachlorobutadiene	ND		14	2.7	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
Hexachlorocyclopentadiene	ND		14	4.8	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
Hexachloroethane	ND		14	4.1	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
Nitrobenzene	ND		14	4.2	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
N-Nitrosodimethylamine	ND		27	6.3	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
N-Nitrosodi-n-propylamine	ND		14	5.0	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
Pentachlorophenol	130 J		410	120	ug/Kg	⊗	09/03/19 09:39	09/04/19 14:40	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	81			28 - 143			09/03/19 09:39	09/04/19 14:40	1
2-Fluorobiphenyl	95			42 - 140			09/03/19 09:39	09/04/19 14:40	1
Nitrobenzene-d5	96			38 - 141			09/03/19 09:39	09/04/19 14:40	1
Terphenyl-d14	98			68 - 138			09/03/19 09:39	09/04/19 14:40	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		68	8.2	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
1,2-Dichlorobenzene	ND		68	16	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
1,3-Dichlorobenzene	ND		68	6.6	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
1,4-Dichlorobenzene	ND		68	11	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
1-Methylnaphthalene	ND		41	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
2,4,5-Trichlorophenol	ND		270	61	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
2,4-Dichlorophenol	ND		140	20	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
2,4-Dimethylphenol	ND		140	20	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
2-Chloronaphthalene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
2-Chlorophenol	ND		270	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
2-Methylnaphthalene	ND		68	12	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
2-Methylphenol	ND		200	13	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
2-Nitroaniline	ND		140	20	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
2-Nitrophenol	ND		270	29	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
3 & 4 Methylphenol	ND		270	20	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
3-Nitroaniline	ND		270	55	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
4,6-Dinitro-2-methylphenol	ND		1400	140	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
4-Bromophenyl phenyl ether	ND		270	12	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
4-Chloro-3-methylphenol	ND		200	45	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
4-Chlorophenyl phenyl ether	ND		270	8.6	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
4-Nitroaniline	ND		200	68	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
4-Nitrophenol	ND		2000	500	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
Acenaphthene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
Acenaphthylene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
Anthracene	8.9 J		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
Benzo[a]anthracene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
Benzo[a]pyrene	ND		82	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
Benzo[b]fluoranthene	ND		34	6.8	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
Benzo[g,h,i]perylene	ND		82	12	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
Benzo[k]fluoranthene	ND		82	19	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
Benzoic acid	1100 J		2700	790	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1
Benzyl alcohol	ND *		680	110	ug/Kg	⊗	09/03/19 09:39	09/05/19 18:47	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-04-SO
Date Collected: 08/20/19 15:43
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-14
Matrix: Solid
Percent Solids: 72.6

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bis(2-chloroethoxy)methane	ND		270	25	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Bis(2-ethylhexyl) phthalate	120	J	820	97	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
bis(chloroisopropyl) ether	ND		270	19	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Butyl benzyl phthalate	100	J B	270	70	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Carbazole	ND *		200	11	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Chrysene	ND		82	18	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Dibenz(a,h)anthracene	ND		68	16	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Dibenzofuran	ND		200	8.1	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Diethyl phthalate	ND		2000	100	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Dimethyl phthalate	ND		200	18	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Di-n-butyl phthalate	ND		680	78	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Di-n-octyl phthalate	ND		200	78	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Fluoranthene	14	J	34	6.8	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Fluorene	ND		34	6.8	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Indeno[1,2,3-cd]pyrene	ND		55	6.8	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Isophorone	ND		200	10	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Naphthalene	ND		34	6.8	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
N-Nitrosodiphenylamine	ND		82	11	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Phenanthrene	ND		82	16	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Phenol	ND		200	31	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Pyrene	11	J	82	8.7	ug/Kg	✉	09/03/19 09:39	09/05/19 18:47	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	88			52 - 125			09/03/19 09:39	09/05/19 18:47	1
2-Fluorobiphenyl	85			57 - 120			09/03/19 09:39	09/05/19 18:47	1
2-Fluorophenol (Surr)	94			60 - 125			09/03/19 09:39	09/05/19 18:47	1
Nitrobenzene-d5 (Surr)	102			62 - 120			09/03/19 09:39	09/05/19 18:47	1
Phenol-d5 (Surr)	94			59 - 120			09/03/19 09:39	09/05/19 18:47	1
Terphenyl-d14 (Surr)	97			58 - 120			09/03/19 09:39	09/05/19 18:47	1

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.40	0.089	ug/Kg	✉	09/03/19 12:39	09/06/19 19:12	1
Ethylene Dibromide	ND		0.067	0.016	ug/Kg	✉	09/03/19 12:39	09/06/19 19:12	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	41	X		60 - 140			09/03/19 12:39	09/06/19 19:12	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		13	2.9	ug/Kg	✉	09/06/19 08:42	09/09/19 15:41	1
PCB-1221	ND		13	2.9	ug/Kg	✉	09/06/19 08:42	09/09/19 15:41	1
PCB-1232	ND		13	2.9	ug/Kg	✉	09/06/19 08:42	09/09/19 15:41	1
PCB-1242	ND		13	2.9	ug/Kg	✉	09/06/19 08:42	09/09/19 15:41	1
PCB-1248	ND		13	2.9	ug/Kg	✉	09/06/19 08:42	09/09/19 15:41	1
PCB-1254	3.8	J p	13	2.9	ug/Kg	✉	09/06/19 08:42	09/09/19 15:41	1
PCB-1260	ND		13	2.9	ug/Kg	✉	09/06/19 08:42	09/09/19 15:41	1
PCB-1268	ND		13	2.9	ug/Kg	✉	09/06/19 08:42	09/09/19 15:41	1
PCB-1262	ND		13	2.9	ug/Kg	✉	09/06/19 08:42	09/09/19 15:41	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-04-SO

Lab Sample ID: 580-88695-14

Date Collected: 08/20/19 15:43
Date Received: 08/26/19 12:25

Matrix: Solid

Percent Solids: 72.6

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	51	p	31 - 142	09/06/19 08:42	09/09/19 15:41	1
DCB Decachlorobiphenyl (Surr)	93		20 - 150	09/06/19 08:42	09/09/19 15:41	1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	46		14	4.6	mg/Kg	⌚	09/03/19 11:22	09/04/19 01:00	1
Residual Range Organics (RRO) (C25-C36)	360		27	6.8	mg/Kg	⌚	09/03/19 11:22	09/04/19 01:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	86		50 - 150				09/03/19 11:22	09/04/19 01:00	1
<i>n</i> -Triaccontane-d62	101		50 - 150				09/03/19 11:22	09/04/19 01:00	1

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	16		0.22	0.044	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:15	5
Barium	220		0.44	0.10	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:15	5
Cadmium	0.47		0.18	0.034	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:15	5
Chromium	27		0.22	0.028	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:15	5
Lead	78	B	0.22	0.021	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:15	5
Selenium	1.5		0.48	0.13	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:15	5
Silver	0.20		0.088	0.0088	mg/Kg	⌚	09/06/19 13:00	09/11/19 19:40	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12		0.032	0.0097	mg/Kg	⌚	09/09/19 10:05	09/09/19 15:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	72.6		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	27.4		0.1	0.1	%			08/30/19 14:26	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-05-SO
Date Collected: 08/20/19 15:52
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-15
Matrix: Solid
Percent Solids: 64.2

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	10	0.57	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
1,1,2,2-Tetrachloroethane	ND	H	20	2.8	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
1,1,2-Trichloroethane	ND	H	10	0.93	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
1,1-Dichloroethene	ND	H	10	1.3	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
1,2-Dibromoethane	ND	H	10	0.91	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
1,2-Dichloroethane	ND	H *	10	1.3	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
1,4-Dichlorobenzene	ND	H	10	0.65	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Benzene	1.1	J H	10	0.85	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Bromodichloromethane	ND	H	10	0.64	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Bromoform	ND	H *	10	2.3	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Bromomethane	ND	H	10	1.5	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Chloroform	ND	H	10	0.61	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
cis-1,3-Dichloropropene	ND	H	10	0.75	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Dibromochloromethane	ND	H	10	1.2	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Dibromomethane	ND	H	10	1.2	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Hexachlorobutadiene	ND	H	10	1.3	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Naphthalene	22	H	10	1.8	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Tetrachloroethene	ND	H	10	1.3	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
trans-1,3-Dichloropropene	ND	H	10	0.69	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Trichloroethene	ND	H	10	0.87	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Vinyl chloride	ND	H *	41	4.8	ug/Kg	✉	09/03/19 17:49	09/04/19 15:01	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87			81 - 121			09/03/19 17:49	09/04/19 15:01	1
4-Bromofluorobenzene (Surr)	110			79 - 120			09/03/19 17:49	09/04/19 15:01	1
Dibromofluoromethane (Surr)	77	X		78 - 118			09/03/19 17:49	09/04/19 15:01	1
Toluene-d8 (Surr)	108			79 - 119			09/03/19 17:49	09/04/19 15:01	1
Trifluorotoluene (Surr)	93			52 - 152			09/03/19 17:49	09/04/19 15:01	1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	1.7	J H	10	1.3	ug/Kg	✉	09/14/19 14:31	09/14/19 22:40	1
Bromomethane	ND	H	10	1.5	ug/Kg	✉	09/14/19 14:31	09/14/19 22:40	1
Chloroform	ND	H	10	0.61	ug/Kg	✉	09/14/19 14:31	09/14/19 22:40	1
Naphthalene	49	H B	10	1.8	ug/Kg	✉	09/14/19 14:31	09/14/19 22:40	1
Vinyl chloride	7.4	J H	41	4.8	ug/Kg	✉	09/14/19 14:31	09/14/19 22:40	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	83			81 - 121			09/14/19 14:31	09/14/19 22:40	1
4-Bromofluorobenzene (Surr)	98			79 - 120			09/14/19 14:31	09/14/19 22:40	1
Dibromofluoromethane (Surr)	89			78 - 118			09/14/19 14:31	09/14/19 22:40	1
Toluene-d8 (Surr)	103			79 - 119			09/14/19 14:31	09/14/19 22:40	1
Trifluorotoluene (Surr)	107			52 - 152			09/14/19 14:31	09/14/19 22:40	1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		81	19	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
1,1-Dichloroethane	ND		81	19	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
1,1-Dichloropropene	ND		81	11	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
1,2,3-Trichlorobenzene	ND		300	65	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-05-SO
Date Collected: 08/20/19 15:52
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-15
Matrix: Solid
Percent Solids: 64.2

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		81	23	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
1,2,4-Trichlorobenzene	ND		120	31	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
1,2,4-Trimethylbenzene	270		81	27	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
1,2-Dibromo-3-Chloropropane	ND		510	31	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
1,2-Dichlorobenzene	ND		81	18	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
1,2-Dichloropropane	ND		41	13	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
1,3,5-Trimethylbenzene	86		81	15	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
1,3-Dichlorobenzene	ND		120	27	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
1,3-Dichloropropane	ND		120	28	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
2,2-Dichloropropane	ND		81	25	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
2-Butanone	ND		1200	380	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
2-Chlorotoluene	ND		81	18	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
4-Chlorotoluene	ND		81	20	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
4-Isopropyltoluene	25 J		81	21	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
4-Methyl-2-pentanone	ND *		810	160	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Acetone	ND		1600	350	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Bromobenzene	ND		200	35	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Bromochloromethane	ND		81	13	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Carbon disulfide	ND		120	25	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Carbon tetrachloride	ND		41	16	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Chlorobenzene	ND		81	9.7	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Chloroethane	ND		810	20	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Chloromethane	ND		200	20	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
cis-1,2-Dichloroethene	ND		120	26	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Dichlorodifluoromethane	ND		410	93	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Ethylbenzene	34 J		81	18	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Isopropylbenzene	ND		81	17	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Methyl tert-butyl ether	ND		81	12	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Methylene Chloride	ND		510	130	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
m-Xylene & p-Xylene	190 J		410	30	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
n-Butylbenzene	210 J		300	16	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
N-Propylbenzene	32 J		81	14	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
o-Xylene	77 J		120	27	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
sec-Butylbenzene	ND		81	17	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Styrene	ND		81	12	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
t-Butylbenzene	ND		81	16	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Toluene	47 J		300	27	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
trans-1,2-Dichloroethene	ND		120	30	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1
Trichlorofluoromethane	ND		410	23	ug/Kg	✉	08/30/19 20:41	08/31/19 17:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		80 - 121	08/30/19 20:41	08/31/19 17:39	1
4-Bromofluorobenzene (Surr)	94		80 - 120	08/30/19 20:41	08/31/19 17:39	1
Dibromofluoromethane (Surr)	90		80 - 120	08/30/19 20:41	08/31/19 17:39	1
Toluene-d8 (Surr)	115		80 - 120	08/30/19 20:41	08/31/19 17:39	1
Trifluorotoluene (Surr)	113		80 - 120	08/30/19 20:41	08/31/19 17:39	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		150	63	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-05-SO
Date Collected: 08/20/19 15:52
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-15
Matrix: Solid
Percent Solids: 64.2

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-Dinitrophenol	ND		2300	460	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
2,4-Dinitrotoluene	ND		300	60	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
2,6-Dinitrotoluene	ND		150	47	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
3,3'-Dichlorobenzidine	ND		150	66	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
4-Chloroaniline	ND		2300	730	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
Bis(2-chloroethyl)ether	ND		150	47	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
Hexachlorobenzene	ND		150	56	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
Hexachlorobutadiene	ND		150	30	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
Hexachlorocyclopentadiene	ND		150	53	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
Hexachloroethane	ND		150	46	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
Nitrobenzene	ND		150	47	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
N-Nitrosodimethylamine	ND		300	70	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
N-Nitrosodi-n-propylamine	ND		150	56	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
Pentachlorophenol	ND		4600	1400	ug/Kg	✉	09/03/19 09:39	09/04/19 15:03	10
Surrogate		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	98			28 - 143			09/03/19 09:39	09/04/19 15:03	10
2-Fluorobiphenyl	87			42 - 140			09/03/19 09:39	09/04/19 15:03	10
Nitrobenzene-d5	76			38 - 141			09/03/19 09:39	09/04/19 15:03	10
Terphenyl-d14	98			68 - 138			09/03/19 09:39	09/04/19 15:03	10

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		760	91	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
1,2-Dichlorobenzene	ND		760	180	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
1,3-Dichlorobenzene	ND		760	73	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
1,4-Dichlorobenzene	ND		760	130	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
1-Methylnaphthalene	94 J		460	76	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
2,4,5-Trichlorophenol	ND		3000	680	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
2,4-Dichlorophenol	ND		1500	230	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
2,4-Dimethylphenol	ND		1500	230	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
2-Chloronaphthalene	ND		380	76	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
2-Chlorophenol	ND		3000	200	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
2-Methylnaphthalene	150 J		760	130	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
2-Methylphenol	ND		2300	150	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
2-Nitroaniline	ND		1500	230	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
2-Nitrophenol	ND		3000	320	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
3 & 4 Methylphenol	ND		3000	230	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
3-Nitroaniline	ND		3000	610	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
4,6-Dinitro-2-methylphenol	ND		15000	1500	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
4-Bromophenyl phenyl ether	ND		3000	140	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
4-Chloro-3-methylphenol	ND		2300	500	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
4-Chlorophenyl phenyl ether	ND		3000	96	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
4-Nitroaniline	ND		2300	760	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
4-Nitrophenol	ND		23000	5600	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
Acenaphthene	ND		380	76	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
Acenaphthylene	ND		380	76	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
Anthracene	ND		380	76	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
Benzo[a]anthracene	ND		380	76	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10
Benzo[a]pyrene	ND		910	200	ug/Kg	✉	09/03/19 09:39	09/05/19 19:11	10

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-05-SO

Date Collected: 08/20/19 15:52

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-15

Matrix: Solid

Percent Solids: 64.2

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		380	76	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Benzo[g,h,i]perylene	ND		910	140	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Benzo[k]fluoranthene	ND		910	210	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Benzoic acid	ND		30000	8800	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Benzyl alcohol	ND *		7600	1200	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Bis(2-chloroethoxy)methane	ND		3000	270	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Bis(2-ethylhexyl) phthalate	ND		9100	1100	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
bis(chloroisopropyl) ether	ND		3000	210	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Butyl benzyl phthalate	ND		3000	780	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Carbazole	ND *		2300	120	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Chrysene	ND		910	200	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Dibenz(a,h)anthracene	ND		760	180	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Dibenzofuran	ND		2300	90	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Diethyl phthalate	ND		23000	1200	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Dimethyl phthalate	ND		2300	200	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Di-n-butyl phthalate	ND		7600	870	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Di-n-octyl phthalate	ND		2300	870	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Fluoranthene	ND		380	76	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Fluorene	ND		380	76	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Indeno[1,2,3-cd]pyrene	ND		610	76	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Isophorone	ND		2300	110	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Naphthalene	ND		380	76	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
N-Nitrosodiphenylamine	ND		910	120	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Phenanthrene	ND		910	180	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Phenol	ND		2300	350	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Pyrene	ND		910	97	ug/Kg	⌚	09/03/19 09:39	09/05/19 19:11	10
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	164	X		52 - 125			09/03/19 09:39	09/05/19 19:11	10
2-Fluorobiphenyl	96			57 - 120			09/03/19 09:39	09/05/19 19:11	10
2-Fluorophenol (Surr)	96			60 - 125			09/03/19 09:39	09/05/19 19:11	10
Nitrobenzene-d5 (Surr)	109			62 - 120			09/03/19 09:39	09/05/19 19:11	10
Phenol-d5 (Surr)	109			59 - 120			09/03/19 09:39	09/05/19 19:11	10
Terphenyl-d14 (Surr)	110			58 - 120			09/03/19 09:39	09/05/19 19:11	10

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.43	0.095	ug/Kg	⌚	09/03/19 12:39	09/06/19 19:28	1
Ethylene Dibromide	ND		0.072	0.017	ug/Kg	⌚	09/03/19 12:39	09/06/19 19:28	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	12	X		60 - 140			09/03/19 12:39	09/06/19 19:28	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		15	3.3	ug/Kg	⌚	09/06/19 08:42	09/09/19 16:01	1
PCB-1221	ND		15	3.3	ug/Kg	⌚	09/06/19 08:42	09/09/19 16:01	1
PCB-1232	ND		15	3.3	ug/Kg	⌚	09/06/19 08:42	09/09/19 16:01	1
PCB-1242	ND		15	3.3	ug/Kg	⌚	09/06/19 08:42	09/09/19 16:01	1
PCB-1248	ND		15	3.3	ug/Kg	⌚	09/06/19 08:42	09/09/19 16:01	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-05-SO
 Date Collected: 08/20/19 15:52
 Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-15
 Matrix: Solid
 Percent Solids: 64.2

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1254	25		15	3.3	ug/Kg	✉	09/06/19 08:42	09/09/19 16:01	1
PCB-1260	ND		15	3.3	ug/Kg	✉	09/06/19 08:42	09/09/19 16:01	1
PCB-1268	ND		15	3.3	ug/Kg	✉	09/06/19 08:42	09/09/19 16:01	1
PCB-1262	ND		15	3.3	ug/Kg	✉	09/06/19 08:42	09/09/19 16:01	1

Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
			31 - 142	20 - 150				
Tetrachloro-m-xylene	44					09/06/19 08:42	09/09/19 16:01	1
DCB Decachlorobiphenyl (Surr)	88					09/06/19 08:42	09/09/19 16:01	1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	1600		78	26	mg/Kg	✉	09/03/19 11:22	09/04/19 01:20	5
Residual Range Organics (RRO) (C25-C36)	5800		160	39	mg/Kg	✉	09/03/19 11:22	09/04/19 01:20	5
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
<i>o</i> -Terphenyl	114		50 - 150			09/03/19 11:22	09/04/19 01:20	5	
<i>n</i> -Triaccontane-d62	99		50 - 150			09/03/19 11:22	09/04/19 01:20	5	

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	12		0.24	0.049	mg/Kg	✉	09/06/19 13:00	09/11/19 09:20	5
Barium	290		0.49	0.11	mg/Kg	✉	09/06/19 13:00	09/11/19 09:20	5
Cadmium	1.9		0.20	0.038	mg/Kg	✉	09/06/19 13:00	09/11/19 09:20	5
Chromium	28		0.24	0.031	mg/Kg	✉	09/06/19 13:00	09/11/19 09:20	5
Lead	210	B	0.24	0.023	mg/Kg	✉	09/06/19 13:00	09/11/19 09:20	5
Selenium	1.6		0.54	0.14	mg/Kg	✉	09/06/19 13:00	09/11/19 09:20	5
Silver	0.21		0.098	0.0098	mg/Kg	✉	09/06/19 13:00	09/11/19 19:45	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.18		0.038	0.012	mg/Kg	✉	09/09/19 10:05	09/09/19 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	64.2		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	35.8		0.1	0.1	%			08/30/19 14:26	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-07-SO
Date Collected: 08/20/19 16:01
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-16
Matrix: Solid
Percent Solids: 81.5

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND	H	6.6	0.37	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
1,1,2,2-Tetrachloroethane	ND	H	13	1.8	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
1,1,2-Trichloroethane	ND	H	6.6	0.60	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
1,1-Dichloroethene	ND	H	6.6	0.81	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
1,2-Dibromoethane	ND	H	6.6	0.59	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
1,2-Dichloroethane	ND	H *	6.6	0.83	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
1,4-Dichlorobenzene	ND	H	6.6	0.42	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Benzene	ND	H	6.6	0.55	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Bromodichloromethane	ND	H	6.6	0.41	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Bromoform	ND	H *	6.6	1.5	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Bromomethane	ND	H	6.6	0.97	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Chloroform	ND	H	6.6	0.39	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
cis-1,3-Dichloropropene	ND	H	6.6	0.49	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Dibromochloromethane	ND	H	6.6	0.75	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Dibromomethane	ND	H	6.6	0.77	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Hexachlorobutadiene	ND	H	6.6	0.87	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Naphthalene	4.8	J H	6.6	1.2	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Tetrachloroethene	ND	H	6.6	0.83	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
trans-1,3-Dichloropropene	ND	H	6.6	0.45	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Trichloroethene	ND	H	6.6	0.56	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1
Vinyl chloride	ND	H *	26	3.1	ug/Kg	✉	09/03/19 17:49	09/04/19 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	126	X	81 - 121	09/03/19 17:49	09/04/19 15:27	1
4-Bromofluorobenzene (Surr)	110		79 - 120	09/03/19 17:49	09/04/19 15:27	1
Dibromofluoromethane (Surr)	110		78 - 118	09/03/19 17:49	09/04/19 15:27	1
Toluene-d8 (Surr)	103		79 - 119	09/03/19 17:49	09/04/19 15:27	1
Trifluorotoluene (Surr)	112		52 - 152	09/03/19 17:49	09/04/19 15:27	1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	11	H B	6.6	1.2	ug/Kg	✉	09/14/19 14:31	09/14/19 23:07	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dichloroethane-d4 (Surr)	94		81 - 121	09/14/19 14:31	09/14/19 23:07	1			
4-Bromofluorobenzene (Surr)	99		79 - 120	09/14/19 14:31	09/14/19 23:07	1			
Dibromofluoromethane (Surr)	91		78 - 118	09/14/19 14:31	09/14/19 23:07	1			
Toluene-d8 (Surr)	105		79 - 119	09/14/19 14:31	09/14/19 23:07	1			
Trifluorotoluene (Surr)	104		52 - 152	09/14/19 14:31	09/14/19 23:07	1			

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		53	13	ug/Kg	✉	08/30/19 20:41	08/31/19 18:04	1
1,1-Dichloroethane	ND		53	12	ug/Kg	✉	08/30/19 20:41	08/31/19 18:04	1
1,1-Dichloropropene	ND		53	7.0	ug/Kg	✉	08/30/19 20:41	08/31/19 18:04	1
1,2,3-Trichlorobenzene	ND		200	42	ug/Kg	✉	08/30/19 20:41	08/31/19 18:04	1
1,2,3-Trichloropropane	ND		53	15	ug/Kg	✉	08/30/19 20:41	08/31/19 18:04	1
1,2,4-Trichlorobenzene	ND		79	20	ug/Kg	✉	08/30/19 20:41	08/31/19 18:04	1
1,2,4-Trimethylbenzene	100		53	18	ug/Kg	✉	08/30/19 20:41	08/31/19 18:04	1
1,2-Dibromo-3-Chloropropane	ND		330	20	ug/Kg	✉	08/30/19 20:41	08/31/19 18:04	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-07-SO
Date Collected: 08/20/19 16:01
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-16
Matrix: Solid
Percent Solids: 81.5

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		53	11	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
1,2-Dichloropropane	ND		26	8.7	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
1,3,5-Trimethylbenzene	31 J		53	10	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
1,3-Dichlorobenzene	ND		79	17	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
1,3-Dichloropropane	ND		79	18	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
2,2-Dichloropropane	ND		53	16	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
2-Butanone	ND		790	240	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
2-Chlorotoluene	ND		53	12	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
4-Chlorotoluene	ND		53	13	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
4-Isopropyltoluene	ND		53	13	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
4-Methyl-2-pentanone	ND *		530	110	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Acetone	240 J B		1100	230	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Bromobenzene	ND		130	22	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Bromochloromethane	ND		53	8.1	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Carbon disulfide	ND		79	16	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Carbon tetrachloride	ND		26	11	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Chlorobenzene	ND		53	6.3	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Chloroethane	ND		530	13	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Chloromethane	ND		130	13	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
cis-1,2-Dichloroethene	ND		79	17	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Dichlorodifluoromethane	ND		260	60	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Ethylbenzene	ND		53	12	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Isopropylbenzene	ND		53	11	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Methyl tert-butyl ether	ND		53	7.9	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Methylene Chloride	ND		330	85	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
m-Xylene & p-Xylene	46 J		260	20	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
n-Butylbenzene	72 J		200	11	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
N-Propylbenzene	11 J		53	9.1	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
o-Xylene	19 J		79	18	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
sec-Butylbenzene	ND		53	11	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Styrene	ND		53	8.0	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
t-Butylbenzene	ND		53	10	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Toluene	ND		200	18	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
trans-1,2-Dichloroethene	ND		79	19	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Trichlorofluoromethane	ND		260	15	ug/Kg	⊗	08/30/19 20:41	08/31/19 18:04	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90			80 - 121			08/30/19 20:41	08/31/19 18:04	1
4-Bromofluorobenzene (Surr)	97			80 - 120			08/30/19 20:41	08/31/19 18:04	1
Dibromofluoromethane (Surr)	91			80 - 120			08/30/19 20:41	08/31/19 18:04	1
Toluene-d8 (Surr)	114			80 - 120			08/30/19 20:41	08/31/19 18:04	1
Trifluorotoluene (Surr)	123 X			80 - 120			08/30/19 20:41	08/31/19 18:04	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		12	4.9	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
2,4-Dinitrophenol	ND		180	36	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
2,4-Dinitrotoluene	ND		24	4.7	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
2,6-Dinitrotoluene	ND		12	3.7	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
3,3'-Dichlorobenzidine	ND		12	5.2	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-07-SO
Date Collected: 08/20/19 16:01
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-16
Matrix: Solid
Percent Solids: 81.5

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chloroaniline	ND		180	57	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
Bis(2-chloroethyl)ether	ND		12	3.7	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
Hexachlorobenzene	ND		12	4.4	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
Hexachlorobutadiene	ND		12	2.3	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
Hexachlorocyclopentadiene	ND		12	4.2	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
Hexachloroethane	ND		12	3.6	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
Nitrobenzene	ND		12	3.7	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
N-Nitrosodimethylamine	ND		24	5.5	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
N-Nitrosodi-n-propylamine	ND		12	4.4	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
Pentachlorophenol	ND		360	110	ug/Kg	⊗	09/03/19 09:39	09/04/19 15:27	1
Surrogate		%Recovery	Qualifier	Limits		Prepared		Analyzed	Dil Fac
2,4,6-Tribromophenol		83		28 - 143		09/03/19 09:39		09/04/19 15:27	1
2-Fluorobiphenyl		102		42 - 140		09/03/19 09:39		09/04/19 15:27	1
Nitrobenzene-d5		88		38 - 141		09/03/19 09:39		09/04/19 15:27	1
Terphenyl-d14		101		68 - 138		09/03/19 09:39		09/04/19 15:27	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		60	7.2	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
1,2-Dichlorobenzene	ND		60	14	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
1,3-Dichlorobenzene	ND		60	5.7	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
1,4-Dichlorobenzene	ND		60	9.9	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
1-Methylnaphthalene	ND		36	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
2,4,5-Trichlorophenol	ND		240	54	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
2,4-Dichlorophenol	ND		120	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
2,4-Dimethylphenol	ND		120	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
2-Chloronaphthalene	ND		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
2-Chlorophenol	ND		240	16	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
2-Methylnaphthalene	ND		60	11	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
2-Methylphenol	ND		180	12	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
2-Nitroaniline	ND		120	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
2-Nitrophenol	ND		240	25	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
3 & 4 Methylphenol	ND		240	18	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
3-Nitroaniline	ND		240	48	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
4,6-Dinitro-2-methylphenol	ND		1200	120	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
4-Bromophenyl phenyl ether	ND		240	11	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
4-Chloro-3-methylphenol	ND		180	39	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
4-Chlorophenyl phenyl ether	ND		240	7.5	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
4-Nitroaniline	ND		180	60	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
4-Nitrophenol	ND		1800	440	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
Acenaphthene	ND		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
Acenaphthylene	ND		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
Anthracene	ND		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
Benzo[a]anthracene	ND		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
Benzo[a]pyrene	ND		72	16	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
Benzo[b]fluoranthene	ND		30	6.0	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
Benzo[g,h,i]perylene	ND		72	11	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
Benzo[k]fluoranthene	ND		72	17	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1
Benzoic acid	940	J	2400	690	ug/Kg	⊗	09/03/19 09:39	09/05/19 19:34	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-07-SO
Date Collected: 08/20/19 16:01
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-16
Matrix: Solid
Percent Solids: 81.5

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	ND	*	600	92	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Bis(2-chloroethoxy)methane	ND		240	22	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Bis(2-ethylhexyl) phthalate	520	J	720	85	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
bis(chloroisopropyl) ether	ND		240	17	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Butyl benzyl phthalate	400	B	240	61	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Carbazole	ND	*	180	9.8	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Chrysene	ND		72	16	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Dibenz(a,h)anthracene	ND		60	14	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Dibenzofuran	ND		180	7.1	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Diethyl phthalate	ND		1800	91	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Dimethyl phthalate	ND		180	16	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Di-n-butyl phthalate	ND		600	68	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Di-n-octyl phthalate	ND		180	68	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Fluoranthene	13	J	30	6.0	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Fluorene	ND		30	6.0	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Indeno[1,2,3-cd]pyrene	ND		48	6.0	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Isophorone	ND		180	8.8	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Naphthalene	ND		30	6.0	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
N-Nitrosodiphenylamine	ND		72	9.6	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Phenanthrene	ND		72	14	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Phenol	ND		180	27	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1
Pyrene	8.1	J	72	7.7	ug/Kg	✉	09/03/19 09:39	09/05/19 19:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	97		52 - 125	09/03/19 09:39	09/05/19 19:34	1
2-Fluorobiphenyl	92		57 - 120	09/03/19 09:39	09/05/19 19:34	1
2-Fluorophenol (Surr)	94		60 - 125	09/03/19 09:39	09/05/19 19:34	1
Nitrobenzene-d5 (Surr)	105		62 - 120	09/03/19 09:39	09/05/19 19:34	1
Phenol-d5 (Surr)	93		59 - 120	09/03/19 09:39	09/05/19 19:34	1
Terphenyl-d14 (Surr)	97		58 - 120	09/03/19 09:39	09/05/19 19:34	1

Method: 8011 - EDB and DBCP in Water by Microextraction

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.36	0.080	ug/Kg	✉	09/03/19 12:39	09/06/19 19:44	1
Ethylene Dibromide	ND		0.061	0.015	ug/Kg	✉	09/03/19 12:39	09/06/19 19:44	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
1,2-Dibromopropane	11	X	60 - 140	09/03/19 12:39	09/06/19 19:44	1			

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	25		12	4.1	mg/Kg	✉	09/03/19 11:22	09/04/19 01:59	1
Residual Range Organics (RRO) (C25-C36)	210		24	6.0	mg/Kg	✉	09/03/19 11:22	09/04/19 01:59	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
<i>o</i> -Terphenyl	102		50 - 150	09/03/19 11:22	09/04/19 01:59	1			
<i>n</i> -Triaccontane-d62	115		50 - 150	09/03/19 11:22	09/04/19 01:59	1			

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-07-SO

Date Collected: 08/20/19 16:01

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-16

Matrix: Solid

Percent Solids: 81.5

Method: 6020A - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	11		0.20	0.040	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:25	5
Barium	140		0.40	0.090	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:25	5
Cadmium	0.37		0.16	0.030	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:25	5
Chromium	22		0.20	0.025	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:25	5
Lead	50	B	0.20	0.019	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:25	5
Selenium	1.1		0.44	0.11	mg/Kg	⌚	09/06/19 13:00	09/11/19 09:25	5
Silver	0.13		0.079	0.0079	mg/Kg	⌚	09/06/19 13:00	09/11/19 19:49	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.15		0.030	0.0091	mg/Kg	⌚	09/09/19 10:05	09/09/19 15:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.5		0.1	0.1	%			08/30/19 14:26	1
Percent Moisture	18.5		0.1	0.1	%			08/30/19 14:26	1

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TD-01-SO

Lab Sample ID: 580-88695-17

Date Collected: 08/21/19 13:43
 Date Received: 08/26/19 12:25

Matrix: Solid

Percent Solids: 56.4

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	4300		170	58	mg/Kg	⊗	09/03/19 11:22	09/04/19 02:19	10
Residual Range Organics (RRO) (C25-C36)	5100		340	86	mg/Kg	⊗	09/03/19 11:22	09/04/19 02:19	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	86		50 - 150				09/03/19 11:22	09/04/19 02:19	10
<i>n-Triaccontane-d62</i>	172	X	50 - 150				09/03/19 11:22	09/04/19 02:19	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	43.6		0.01	0.01	%			08/30/19 15:02	1
Percent Solids	56.4		0.01	0.01	%			08/30/19 15:02	1

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TD-07-SO

Lab Sample ID: 580-88695-18

Date Collected: 08/21/19 13:43
 Date Received: 08/26/19 12:25

Matrix: Solid

Percent Solids: 59.3

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	4200		160	55	mg/Kg	⊗	09/03/19 11:22	09/04/19 02:39	10
Residual Range Organics (RRO) (C25-C36)	4200		320	81	mg/Kg	⊗	09/03/19 11:22	09/04/19 02:39	10
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	77		50 - 150				09/03/19 11:22	09/04/19 02:39	10
<i>n-Triaccontane-d62</i>	180	X	50 - 150				09/03/19 11:22	09/04/19 02:39	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	40.7		0.01	0.01	%			08/30/19 15:02	1
Percent Solids	59.3		0.01	0.01	%			08/30/19 15:02	1

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Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-08-W
Date Collected: 08/21/19 10:55
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-19
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0	0.53	ug/L			08/31/19 01:35	1
Toluene	ND		2.0	0.39	ug/L			08/31/19 01:35	1
Ethylbenzene	ND *		3.0	0.50	ug/L			08/31/19 01:35	1
m-Xylene & p-Xylene	ND *		3.0	0.75	ug/L			08/31/19 01:35	1
o-Xylene	ND		2.0	0.39	ug/L			08/31/19 01:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	94		80 - 120					08/31/19 01:35	1
Trifluorotoluene (Surr)	105		80 - 120					08/31/19 01:35	1
4-Bromofluorobenzene (Surr)	90		80 - 120					08/31/19 01:35	1
Dibromofluoromethane (Surr)	98		80 - 120					08/31/19 01:35	1
1,2-Dichloroethane-d4 (Surr)	108		80 - 126					08/31/19 01:35	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10	0.025	ug/L			09/05/19 12:29	1
2-Methylnaphthalene	ND		0.030	0.0060	ug/L			09/05/19 12:29	1
1-Methylnaphthalene	ND		0.030	0.0070	ug/L			09/05/19 12:29	1
Acenaphthylene	ND *		0.030	0.0060	ug/L			09/05/19 12:29	1
Acenaphthene	ND		0.030	0.0060	ug/L			09/05/19 12:29	1
Fluorene	ND		0.060	0.0060	ug/L			09/05/19 12:29	1
Phenanthrene	ND		0.060	0.017	ug/L			09/05/19 12:29	1
Anthracene	ND		0.060	0.0060	ug/L			09/05/19 12:29	1
Fluoranthene	ND		0.060	0.015	ug/L			09/05/19 12:29	1
Pyrene	ND		0.030	0.0060	ug/L			09/05/19 12:29	1
Benzo[a]anthracene	0.0096 J B		0.060	0.0060	ug/L			09/05/19 12:29	1
Chrysene	ND		0.060	0.015	ug/L			09/05/19 12:29	1
Benzo[b]fluoranthene	ND		0.060	0.013	ug/L			09/05/19 12:29	1
Benzo[k]fluoranthene	ND		0.060	0.0060	ug/L			09/05/19 12:29	1
Benzo[a]pyrene	ND *		0.060	0.0060	ug/L			09/05/19 12:29	1
Indeno[1,2,3-cd]pyrene	ND		0.030	0.0060	ug/L			09/05/19 12:29	1
Dibenz(a,h)anthracene	ND		0.060	0.013	ug/L			09/05/19 12:29	1
Benzo[g,h,i]perylene	ND		0.060	0.0060	ug/L			09/05/19 12:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	69		54 - 120					09/05/19 12:29	1

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Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-09-W
Date Collected: 08/21/19 10:52
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-20
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0	0.53	ug/L			08/31/19 01:59	1
Toluene	ND		2.0	0.39	ug/L			08/31/19 01:59	1
Ethylbenzene	ND *		3.0	0.50	ug/L			08/31/19 01:59	1
m-Xylene & p-Xylene	ND *		3.0	0.75	ug/L			08/31/19 01:59	1
o-Xylene	ND		2.0	0.39	ug/L			08/31/19 01:59	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120					08/31/19 01:59	1
Trifluorotoluene (Surr)	106		80 - 120					08/31/19 01:59	1
4-Bromofluorobenzene (Surr)	106		80 - 120					08/31/19 01:59	1
Dibromofluoromethane (Surr)	110		80 - 120					08/31/19 01:59	1
1,2-Dichloroethane-d4 (Surr)	119		80 - 126					08/31/19 01:59	1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Naphthalene	ND		0.10	0.025	ug/L		08/28/19 09:48	09/05/19 12:53	1	
2-Methylnaphthalene	ND		0.030	0.0060	ug/L		08/28/19 09:48	09/05/19 12:53	1	
1-Methylnaphthalene	ND		0.030	0.0070	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Acenaphthylene	ND *		0.030	0.0060	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Acenaphthene	ND		0.030	0.0060	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Fluorene	ND		0.060	0.0060	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Phenanthrene	ND		0.060	0.017	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Anthracene	ND		0.060	0.0060	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Fluoranthene	ND		0.060	0.015	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Pyrene	ND		0.030	0.0060	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Benzo[a]anthracene	0.010 JB		0.060	0.0060	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Chrysene	ND		0.060	0.015	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Benzo[b]fluoranthene	ND		0.060	0.013	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Benzo[k]fluoranthene	ND		0.060	0.0060	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Benzo[a]pyrene	ND *		0.060	0.0060	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Indeno[1,2,3-cd]pyrene	ND		0.030	0.0060	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Dibenz(a,h)anthracene	ND		0.060	0.013	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Benzo[g,h,i]perylene	ND		0.060	0.0060	ug/L		08/28/19 09:48	09/05/19 12:53	1	
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac	
Terphenyl-d14	68		54 - 120					08/28/19 09:48	09/05/19 12:53	1

Eurofins TestAmerica, Seattle

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-16-W
Date Collected: 08/21/19 10:50
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-21
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0082	B	0.0010	0.00020	mg/L		09/05/19 11:27	09/06/19 20:13	1
Barium	0.027		0.0012	0.00021	mg/L		09/05/19 11:27	09/06/19 20:13	1
Cadmium	ND		0.00040	0.00010	mg/L		09/05/19 11:27	09/06/19 20:13	1
Chromium	0.0020		0.00040	0.00017	mg/L		09/05/19 11:27	09/06/19 20:13	1
Lead	0.00037	J	0.00080	0.00020	mg/L		09/05/19 11:27	09/06/19 20:13	1
Selenium	ND		0.0080	0.0021	mg/L		09/05/19 11:27	09/06/19 20:13	1
Silver	ND		0.00040	0.000055	mg/L		09/05/19 11:27	09/06/19 20:13	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		08/29/19 09:58	08/29/19 15:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	47		2.0	2.0	mg/L		09/03/19 14:56		1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TR-15-W
Date Collected: 08/21/19 12:04
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-22
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.010	B	0.0010	0.00020	mg/L		09/05/19 11:27	09/06/19 20:17	1
Barium	0.023		0.0012	0.00021	mg/L		09/05/19 11:27	09/06/19 20:17	1
Cadmium	ND		0.00040	0.00010	mg/L		09/05/19 11:27	09/06/19 20:17	1
Chromium	0.0018		0.00040	0.00017	mg/L		09/05/19 11:27	09/06/19 20:17	1
Lead	0.00022	J	0.00080	0.00020	mg/L		09/05/19 11:27	09/06/19 20:17	1
Selenium	ND		0.0080	0.0021	mg/L		09/05/19 11:27	09/06/19 20:17	1
Silver	0.000067	J	0.00040	0.000055	mg/L		09/05/19 11:27	09/06/19 20:17	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0071	B	0.0010	0.00020	mg/L		09/06/19 10:36	09/10/19 00:22	1
Barium	0.022		0.0012	0.00021	mg/L		09/06/19 10:36	09/10/19 00:22	1
Cadmium	0.00011	J	0.00040	0.00010	mg/L		09/06/19 10:36	09/10/19 00:22	1
Chromium	0.0015		0.00040	0.00017	mg/L		09/06/19 10:36	09/10/19 00:22	1
Lead	ND		0.00080	0.00020	mg/L		09/06/19 10:36	09/10/19 00:22	1
Selenium	ND		0.0080	0.0021	mg/L		09/06/19 10:36	09/10/19 00:22	1
Silver	0.00074		0.00040	0.000055	mg/L		09/06/19 10:36	09/10/19 00:22	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		08/29/19 09:58	08/29/19 15:35	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/07/19 11:57	09/09/19 17:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	23		2.0	2.0	mg/L			09/03/19 14:56	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TR-10-W
Date Collected: 08/21/19 14:08
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-23
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0084	B	0.0010	0.00020	mg/L		09/05/19 11:27	09/06/19 20:22	1
Barium	0.023		0.0012	0.00021	mg/L		09/05/19 11:27	09/06/19 20:22	1
Cadmium	ND		0.00040	0.00010	mg/L		09/05/19 11:27	09/06/19 20:22	1
Chromium	0.0017		0.00040	0.00017	mg/L		09/05/19 11:27	09/06/19 20:22	1
Lead	0.00027	J	0.00080	0.00020	mg/L		09/05/19 11:27	09/06/19 20:22	1
Selenium	ND		0.0080	0.0021	mg/L		09/05/19 11:27	09/06/19 20:22	1
Silver	ND		0.00040	0.000055	mg/L		09/05/19 11:27	09/06/19 20:22	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0075	B	0.0010	0.00020	mg/L		09/06/19 10:36	09/09/19 23:34	1
Barium	0.022		0.0012	0.00021	mg/L		09/06/19 10:36	09/09/19 23:34	1
Cadmium	0.00042		0.00040	0.00010	mg/L		09/06/19 10:36	09/09/19 23:34	1
Chromium	0.0019		0.00040	0.00017	mg/L		09/06/19 10:36	09/09/19 23:34	1
Lead	0.00042	J	0.00080	0.00020	mg/L		09/06/19 10:36	09/09/19 23:34	1
Selenium	ND		0.0080	0.0021	mg/L		09/06/19 10:36	09/09/19 23:34	1
Silver	0.00014	J	0.00040	0.000055	mg/L		09/06/19 10:36	09/09/19 23:34	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/03/19 08:27	09/03/19 18:54	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/07/19 11:57	09/09/19 17:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	59		2.0	2.0	mg/L			09/03/19 14:56	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TR-11-W
Date Collected: 08/21/19 14:12
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-24
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0067	B	0.0010	0.00020	mg/L		09/05/19 11:27	09/06/19 20:26	1
Barium	0.015		0.0012	0.00021	mg/L		09/05/19 11:27	09/06/19 20:26	1
Cadmium	ND		0.00040	0.00010	mg/L		09/05/19 11:27	09/06/19 20:26	1
Chromium	0.0018		0.00040	0.00017	mg/L		09/05/19 11:27	09/06/19 20:26	1
Lead	ND		0.00080	0.00020	mg/L		09/05/19 11:27	09/06/19 20:26	1
Selenium	ND		0.0080	0.0021	mg/L		09/05/19 11:27	09/06/19 20:26	1
Silver	0.000060	J	0.00040	0.000055	mg/L		09/05/19 11:27	09/06/19 20:26	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0050	B	0.0010	0.00020	mg/L		09/06/19 10:36	09/10/19 00:26	1
Barium	0.013		0.0012	0.00021	mg/L		09/06/19 10:36	09/10/19 00:26	1
Cadmium	ND		0.00040	0.00010	mg/L		09/06/19 10:36	09/10/19 00:26	1
Chromium	0.0014		0.00040	0.00017	mg/L		09/06/19 10:36	09/10/19 00:26	1
Lead	ND		0.00080	0.00020	mg/L		09/06/19 10:36	09/10/19 00:26	1
Selenium	ND		0.0080	0.0021	mg/L		09/06/19 10:36	09/10/19 00:26	1
Silver	ND		0.00040	0.000055	mg/L		09/06/19 10:36	09/10/19 00:26	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/03/19 08:27	09/03/19 18:41	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/07/19 11:57	09/09/19 16:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	41		2.0	2.0	mg/L			09/03/19 14:56	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TR-12-W
Date Collected: 08/21/19 14:56
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-25
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0063	B	0.0010	0.00020	mg/L		09/05/19 11:27	09/06/19 20:30	1
Barium	0.015		0.0012	0.00021	mg/L		09/05/19 11:27	09/06/19 20:30	1
Cadmium	ND		0.00040	0.00010	mg/L		09/05/19 11:27	09/06/19 20:30	1
Chromium	0.0020		0.00040	0.00017	mg/L		09/05/19 11:27	09/06/19 20:30	1
Lead	ND		0.00080	0.00020	mg/L		09/05/19 11:27	09/06/19 20:30	1
Selenium	ND		0.0080	0.0021	mg/L		09/05/19 11:27	09/06/19 20:30	1
Silver	ND		0.00040	0.000055	mg/L		09/05/19 11:27	09/06/19 20:30	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0056	B	0.0010	0.00020	mg/L		09/06/19 10:36	09/10/19 00:31	1
Barium	0.013		0.0012	0.00021	mg/L		09/06/19 10:36	09/10/19 00:31	1
Cadmium	ND		0.00040	0.00010	mg/L		09/06/19 10:36	09/10/19 00:31	1
Chromium	0.0015		0.00040	0.00017	mg/L		09/06/19 10:36	09/10/19 00:31	1
Lead	ND		0.00080	0.00020	mg/L		09/06/19 10:36	09/10/19 00:31	1
Selenium	ND		0.0080	0.0021	mg/L		09/06/19 10:36	09/10/19 00:31	1
Silver	0.000059	J	0.00040	0.000055	mg/L		09/06/19 10:36	09/10/19 00:31	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/03/19 08:27	09/03/19 18:26	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/07/19 11:57	09/09/19 17:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	40		2.0	2.0	mg/L			09/03/19 14:57	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TR-13-W
Date Collected: 08/21/19 18:34
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-26
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0078	B	0.0010	0.00020	mg/L		09/05/19 11:27	09/06/19 20:35	1
Barium	0.023		0.0012	0.00021	mg/L		09/05/19 11:27	09/06/19 20:35	1
Cadmium	ND		0.00040	0.00010	mg/L		09/05/19 11:27	09/06/19 20:35	1
Chromium	0.0019		0.00040	0.00017	mg/L		09/05/19 11:27	09/06/19 20:35	1
Lead	0.00023	J	0.00080	0.00020	mg/L		09/05/19 11:27	09/06/19 20:35	1
Selenium	ND		0.0080	0.0021	mg/L		09/05/19 11:27	09/06/19 20:35	1
Silver	ND		0.00040	0.000055	mg/L		09/05/19 11:27	09/06/19 20:35	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0074	B	0.0010	0.00020	mg/L		09/06/19 10:36	09/10/19 00:35	1
Barium	0.020		0.0012	0.00021	mg/L		09/06/19 10:36	09/10/19 00:35	1
Cadmium	0.00037	J	0.00040	0.00010	mg/L		09/06/19 10:36	09/10/19 00:35	1
Chromium	0.0018		0.00040	0.00017	mg/L		09/06/19 10:36	09/10/19 00:35	1
Lead	0.00038	J	0.00080	0.00020	mg/L		09/06/19 10:36	09/10/19 00:35	1
Selenium	ND		0.0080	0.0021	mg/L		09/06/19 10:36	09/10/19 00:35	1
Silver	ND		0.00040	0.000055	mg/L		09/06/19 10:36	09/10/19 00:35	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/03/19 08:27	09/03/19 18:39	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/07/19 11:57	09/09/19 17:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	42		2.0	2.0	mg/L			09/03/19 14:57	1

Client Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TR-14-W
Date Collected: 08/21/19 18:34
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-27
Matrix: Water

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0078	B	0.0010	0.00020	mg/L		09/05/19 11:27	09/06/19 20:39	1
Barium	0.023		0.0012	0.00021	mg/L		09/05/19 11:27	09/06/19 20:39	1
Cadmium	ND		0.00040	0.00010	mg/L		09/05/19 11:27	09/06/19 20:39	1
Chromium	0.0018		0.00040	0.00017	mg/L		09/05/19 11:27	09/06/19 20:39	1
Lead	ND		0.00080	0.00020	mg/L		09/05/19 11:27	09/06/19 20:39	1
Selenium	ND		0.0080	0.0021	mg/L		09/05/19 11:27	09/06/19 20:39	1
Silver	0.000061	J	0.00040	0.000055	mg/L		09/05/19 11:27	09/06/19 20:39	1

Method: 6020A - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0065	B	0.0010	0.00020	mg/L		09/06/19 10:36	09/10/19 00:40	1
Barium	0.020		0.0012	0.00021	mg/L		09/06/19 10:36	09/10/19 00:40	1
Cadmium	ND		0.00040	0.00010	mg/L		09/06/19 10:36	09/10/19 00:40	1
Chromium	0.0016		0.00040	0.00017	mg/L		09/06/19 10:36	09/10/19 00:40	1
Lead	ND		0.00080	0.00020	mg/L		09/06/19 10:36	09/10/19 00:40	1
Selenium	ND		0.0080	0.0021	mg/L		09/06/19 10:36	09/10/19 00:40	1
Silver	ND		0.00040	0.000055	mg/L		09/06/19 10:36	09/10/19 00:40	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/03/19 08:27	09/03/19 18:36	1

Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/07/19 11:57	09/09/19 17:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	43		2.0	2.0	mg/L			09/03/19 14:57	1

Client Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: Trip Blank

Lab Sample ID: 580-88695-28

Matrix: Water

Date Collected: 08/21/19 00:01
 Date Received: 08/26/19 12:25

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.0	0.53	ug/L			08/31/19 00:21	1
Toluene	ND		2.0	0.39	ug/L			08/31/19 00:21	1
Ethylbenzene	ND *		3.0	0.50	ug/L			08/31/19 00:21	1
m-Xylene & p-Xylene	ND *		3.0	0.75	ug/L			08/31/19 00:21	1
o-Xylene	ND		2.0	0.39	ug/L			08/31/19 00:21	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	98		80 - 120					08/31/19 00:21	1
Trifluorotoluene (Surr)	93		80 - 120					08/31/19 00:21	1
4-Bromofluorobenzene (Surr)	107		80 - 120					08/31/19 00:21	1
Dibromofluoromethane (Surr)	96		80 - 120					08/31/19 00:21	1
1,2-Dichloroethane-d4 (Surr)	106		80 - 126					08/31/19 00:21	1

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 580-309932/7

Matrix: Water

Analysis Batch: 309932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		3.0	0.53	ug/L			08/30/19 23:33	1
Ethylbenzene	ND		3.0	0.50	ug/L			08/30/19 23:33	1
m-Xylene & p-Xylene	ND		3.0	0.75	ug/L			08/30/19 23:33	1
o-Xylene	ND		2.0	0.39	ug/L			08/30/19 23:33	1
Toluene	ND		2.0	0.39	ug/L			08/30/19 23:33	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
1,2-Dichloroethane-d4 (Surr)	106		80 - 126				08/30/19 23:33	1
4-Bromofluorobenzene (Surr)	102		80 - 120				08/30/19 23:33	1
Dibromofluoromethane (Surr)	103		80 - 120				08/30/19 23:33	1
Toluene-d8 (Surr)	99		80 - 120				08/30/19 23:33	1
Trifluorotoluene (Surr)	99		80 - 120				08/30/19 23:33	1

Lab Sample ID: LCS 580-309932/4

Matrix: Water

Analysis Batch: 309932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spikes	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
Benzene	10.0	10.5		ug/L		105	75 - 121	
Ethylbenzene	10.0	10.6		ug/L		106	80 - 120	
m-Xylene & p-Xylene	10.0	10.7		ug/L		107	80 - 120	
o-Xylene	10.0	10.5		ug/L		105	80 - 120	
Toluene	10.0	10.5		ug/L		105	80 - 120	

Surrogate	LCSS	LCSS	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
1,2-Dichloroethane-d4 (Surr)	108		80 - 126					
4-Bromofluorobenzene (Surr)	108		80 - 120					
Dibromofluoromethane (Surr)	107		80 - 120					
Toluene-d8 (Surr)	97		80 - 120					
Trifluorotoluene (Surr)	106		80 - 120					

Lab Sample ID: LCSD 580-309932/5

Matrix: Water

Analysis Batch: 309932

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
	Added	Result	Qualifier						
Benzene	10.0	10.1		ug/L		101	75 - 121	3	14
Ethylbenzene	10.0	8.75	*	ug/L		87	80 - 120	19	14
m-Xylene & p-Xylene	10.0	9.22	*	ug/L		92	80 - 120	15	14
o-Xylene	10.0	9.69		ug/L		97	80 - 120	8	16
Toluene	10.0	8.70		ug/L		87	80 - 120	19	19

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier						
1,2-Dichloroethane-d4 (Surr)	107		80 - 126					
4-Bromofluorobenzene (Surr)	108		80 - 120					
Dibromofluoromethane (Surr)	100		80 - 120					
Toluene-d8 (Surr)	86		80 - 120					

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-309932/5

Matrix: Water

Analysis Batch: 309932

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Surrogate	LCSD	LCSD	
	%Recovery	Qualifier	Limits
Trifluorotoluene (Surr)	109		80 - 120

Lab Sample ID: MB 580-309944/1-A

Matrix: Solid

Analysis Batch: 310039

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309944

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND				40	9.6	ug/Kg				1
1,1-Dichloroethane	ND				40	9.2	ug/Kg				1
1,1-Dichloropropene	ND				40	5.3	ug/Kg				1
1,2,3-Trichlorobenzene	ND				150	32	ug/Kg				1
1,2,3-Trichloropropane	ND				40	12	ug/Kg				1
1,2,4-Trichlorobenzene	ND				60	15	ug/Kg				1
1,2,4-Trimethylbenzene	ND				40	14	ug/Kg				1
1,2-Dibromo-3-Chloropropane	ND				250	15	ug/Kg				1
1,2-Dichlorobenzene	ND				40	8.7	ug/Kg				1
1,2-Dichloropropane	ND				20	6.6	ug/Kg				1
1,3,5-Trimethylbenzene	ND				40	7.6	ug/Kg				1
1,3-Dichlorobenzene	ND				60	13	ug/Kg				1
1,3-Dichloropropane	ND				60	14	ug/Kg				1
2,2-Dichloropropane	ND				40	12	ug/Kg				1
2-Butanone	ND				600	190	ug/Kg				1
2-Chlorotoluene	ND				40	8.8	ug/Kg				1
4-Chlorotoluene	ND				40	9.8	ug/Kg				1
4-Isopropyltoluene	ND				40	10	ug/Kg				1
4-Methyl-2-pentanone	ND				400	81	ug/Kg				1
Acetone	527	J			800	170	ug/Kg				1
Bromobenzene	ND				100	17	ug/Kg				1
Bromochloromethane	ND				40	6.2	ug/Kg				1
Carbon disulfide	ND				60	12	ug/Kg				1
Carbon tetrachloride	ND				20	8.1	ug/Kg				1
Chlorobenzene	ND				40	4.8	ug/Kg				1
Chloroethane	ND				400	10	ug/Kg				1
Chloromethane	ND				100	10	ug/Kg				1
cis-1,2-Dichloroethene	ND				60	13	ug/Kg				1
Dichlorodifluoromethane	ND				200	46	ug/Kg				1
Ethylbenzene	ND				40	9.1	ug/Kg				1
Isopropylbenzene	ND				40	8.6	ug/Kg				1
Methyl tert-butyl ether	ND				40	6.0	ug/Kg				1
Methylene Chloride	ND				250	65	ug/Kg				1
m-Xylene & p-Xylene	ND				200	15	ug/Kg				1
n-Butylbenzene	ND				150	8.0	ug/Kg				1
N-Propylbenzene	ND				40	6.9	ug/Kg				1
o-Xylene	ND				60	13	ug/Kg				1
sec-Butylbenzene	ND				40	8.6	ug/Kg				1
Styrene	ND				40	6.1	ug/Kg				1
t-Butylbenzene	ND				40	7.7	ug/Kg				1
Toluene	ND				150	14	ug/Kg				1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-309944/1-A

Matrix: Solid

Analysis Batch: 310039

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309944

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		60	15	ug/Kg		08/30/19 20:41	08/31/19 08:57	1
Trichlorofluoromethane	ND		200	11	ug/Kg		08/30/19 20:41	08/31/19 08:57	1
<hr/>									
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		80 - 121				08/30/19 20:41	08/31/19 08:57	1
4-Bromofluorobenzene (Surr)	96		80 - 120				08/30/19 20:41	08/31/19 08:57	1
Dibromofluoromethane (Surr)	94		80 - 120				08/30/19 20:41	08/31/19 08:57	1
Toluene-d8 (Surr)	113		80 - 120				08/30/19 20:41	08/31/19 08:57	1
Trifluorotoluene (Surr)	94		80 - 120				08/30/19 20:41	08/31/19 08:57	1

Lab Sample ID: LCS 580-309944/2-A

Matrix: Solid

Analysis Batch: 310039

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309944

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	800	747		ug/Kg		93	69 - 150
1,1-Dichloroethane	800	726		ug/Kg		91	70 - 135
1,1-Dichloropropene	800	756		ug/Kg		95	69 - 150
1,2,3-Trichlorobenzene	800	666		ug/Kg		83	62 - 136
1,2,3-Trichloropropane	800	888		ug/Kg		111	70 - 127
1,2,4-Trichlorobenzene	800	736		ug/Kg		92	68 - 131
1,2,4-Trimethylbenzene	800	946		ug/Kg		118	73 - 127
1,2-Dibromo-3-Chloropropane	800	757		ug/Kg		95	62 - 135
1,2-Dichlorobenzene	800	879		ug/Kg		110	78 - 126
1,2-Dichloropropane	800	725		ug/Kg		91	65 - 136
1,3,5-Trimethylbenzene	800	952		ug/Kg		119	72 - 136
1,3-Dichlorobenzene	800	899		ug/Kg		112	78 - 122
1,3-Dichloropropane	800	849		ug/Kg		106	75 - 120
2,2-Dichloropropane	800	616		ug/Kg		77	62 - 150
2-Butanone	4000	3920		ug/Kg		98	55 - 143
2-Chlorotoluene	800	926		ug/Kg		116	77 - 127
4-Chlorotoluene	800	920		ug/Kg		115	78 - 126
4-Isopropyltoluene	800	932		ug/Kg		116	71 - 142
4-Methyl-2-pentanone	4000	4530		ug/Kg		113	68 - 125
Acetone	4000	4540		ug/Kg		114	25 - 150
Bromobenzene	800	873		ug/Kg		109	78 - 126
Bromochloromethane	800	710		ug/Kg		89	76 - 131
Carbon disulfide	800	706		ug/Kg		88	68 - 150
Carbon tetrachloride	800	730		ug/Kg		91	66 - 150
Chlorobenzene	800	882		ug/Kg		110	80 - 123
Chloroethane	800	684		ug/Kg		86	31 - 150
Chloromethane	800	626		ug/Kg		78	43 - 150
cis-1,2-Dichloroethene	800	744		ug/Kg		93	68 - 143
Dichlorodifluoromethane	800	434		ug/Kg		54	10 - 150
Ethylbenzene	800	901		ug/Kg		113	80 - 135
Isopropylbenzene	800	922		ug/Kg		115	74 - 140
Methyl tert-butyl ether	800	753		ug/Kg		94	68 - 132
Methylene Chloride	800	757		ug/Kg		95	54 - 149

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-309944/2-A

Matrix: Solid

Analysis Batch: 310039

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309944

%Rec.

Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
m-Xylene & p-Xylene	800	908		ug/Kg		113	80 - 132
n-Butylbenzene	800	914		ug/Kg		114	69 - 143
N-Propylbenzene	800	956		ug/Kg		120	74 - 143
o-Xylene	800	896		ug/Kg		112	80 - 125
sec-Butylbenzene	800	971		ug/Kg		121	77 - 143
Styrene	800	903		ug/Kg		113	79 - 129
t-Butylbenzene	800	976		ug/Kg		122	72 - 144
Toluene	800	883		ug/Kg		110	75 - 137
trans-1,2-Dichloroethene	800	739		ug/Kg		92	61 - 150
Trichlorofluoromethane	800	728		ug/Kg		91	48 - 150

LCS

LCS

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	96		80 - 121
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	94		80 - 120
Toluene-d8 (Surr)	111		80 - 120
Trifluorotoluene (Surr)	92		80 - 120

Lab Sample ID: LCSD 580-309944/3-A

Matrix: Solid

Analysis Batch: 310039

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 309944

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
1,1,1-Trichloroethane	800	759		ug/Kg		95	69 - 150	2	14
1,1-Dichloroethane	800	742		ug/Kg		93	70 - 135	2	21
1,1-Dichloropropene	800	780		ug/Kg		98	69 - 150	3	11
1,2,3-Trichlorobenzene	800	825		ug/Kg		103	62 - 136	21	34
1,2,3-Trichloropropane	800	945		ug/Kg		118	70 - 127	6	16
1,2,4-Trichlorobenzene	800	833		ug/Kg		104	68 - 131	12	29
1,2,4-Trimethylbenzene	800	962		ug/Kg		120	73 - 127	2	20
1,2-Dibromo-3-Chloropropane	800	924		ug/Kg		116	62 - 135	20	25
1,2-Dichlorobenzene	800	895		ug/Kg		112	78 - 126	2	21
1,2-Dichloropropane	800	748		ug/Kg		93	65 - 136	3	13
1,3,5-Trimethylbenzene	800	975		ug/Kg		122	72 - 136	2	21
1,3-Dichlorobenzene	800	913		ug/Kg		114	78 - 122	2	20
1,3-Dichloropropane	800	895		ug/Kg		112	75 - 120	5	18
2,2-Dichloropropane	800	616		ug/Kg		77	62 - 150	0	20
2-Butanone	4000	4320		ug/Kg		108	55 - 143	10	31
2-Chlorotoluene	800	971		ug/Kg		121	77 - 127	5	16
4-Chlorotoluene	800	946		ug/Kg		118	78 - 126	3	16
4-Isopropyltoluene	800	954		ug/Kg		119	71 - 142	2	23
4-Methyl-2-pentanone	4000	5130 *		ug/Kg		128	68 - 125	12	20
Acetone	4000	4620		ug/Kg		115	25 - 150	2	39
Bromobenzene	800	910		ug/Kg		114	78 - 126	4	19
Bromochloromethane	800	731		ug/Kg		91	76 - 131	3	15
Carbon disulfide	800	731		ug/Kg		91	68 - 150	3	27
Carbon tetrachloride	800	757		ug/Kg		95	66 - 150	4	12
Chlorobenzene	800	900		ug/Kg		113	80 - 123	2	18

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-309944/3-A

Matrix: Solid

Analysis Batch: 310039

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 309944

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD RPD	Limit
Chloroethane	800	673		ug/Kg		84	31 - 150	2	31
Chloromethane	800	614		ug/Kg		77	43 - 150	2	26
cis-1,2-Dichloroethene	800	763		ug/Kg		95	68 - 143	3	20
Dichlorodifluoromethane	800	424		ug/Kg		53	10 - 150	2	40
Ethylbenzene	800	928		ug/Kg		116	80 - 135	3	16
Isopropylbenzene	800	935		ug/Kg		117	74 - 140	1	17
Methyl tert-butyl ether	800	780		ug/Kg		97	68 - 132	3	25
Methylene Chloride	800	775		ug/Kg		97	54 - 149	2	30
m-Xylene & p-Xylene	800	924		ug/Kg		116	80 - 132	2	20
n-Butylbenzene	800	931		ug/Kg		116	69 - 143	2	26
N-Propylbenzene	800	985		ug/Kg		123	74 - 143	3	21
o-Xylene	800	915		ug/Kg		114	80 - 125	2	14
sec-Butylbenzene	800	1000		ug/Kg		126	77 - 143	3	24
Styrene	800	915		ug/Kg		114	79 - 129	1	15
t-Butylbenzene	800	998		ug/Kg		125	72 - 144	2	24
Toluene	800	918		ug/Kg		115	75 - 137	4	20
trans-1,2-Dichloroethene	800	767		ug/Kg		96	61 - 150	4	22
Trichlorofluoromethane	800	732		ug/Kg		91	48 - 150	1	40

LCSD LCSD

Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	94		80 - 120
Toluene-d8 (Surr)	110		80 - 120
Trifluorotoluene (Surr)	92		80 - 120

Lab Sample ID: MB 580-310196/22-A

Matrix: Solid

Analysis Batch: 310228

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310196

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		40	9.6	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,1-Dichloroethane	ND		40	9.2	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,1-Dichloropropene	ND		40	5.3	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,2,3-Trichlorobenzene	ND		150	32	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,2,3-Trichloropropane	ND		40	12	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,2,4-Trichlorobenzene	ND		60	15	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,2,4-Trimethylbenzene	ND		40	14	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,2-Dibromo-3-Chloropropane	ND		250	15	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,2-Dichlorobenzene	ND		40	8.7	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,2-Dichloropropane	ND		20	6.6	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,3,5-Trimethylbenzene	ND		40	7.6	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,3-Dichlorobenzene	ND		60	13	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
1,3-Dichloropropane	ND		60	14	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
2,2-Dichloropropane	ND		40	12	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
2-Butanone	ND		600	190	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
2-Chlorotoluene	ND		40	8.8	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
4-Chlorotoluene	ND		40	9.8	ug/Kg		09/04/19 12:48	09/04/19 13:01	1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 580-310196/22-A

Matrix: Solid

Analysis Batch: 310228

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310196

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Isopropyltoluene	ND		40	10	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
4-Methyl-2-pentanone	ND		400	81	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Acetone	ND		800	170	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Bromobenzene	ND		100	17	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Bromochloromethane	ND		40	6.2	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Carbon disulfide	ND		60	12	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Carbon tetrachloride	ND		20	8.1	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Chlorobenzene	ND		40	4.8	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Chloroethane	ND		400	10	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Chloromethane	ND		100	10	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
cis-1,2-Dichloroethene	ND		60	13	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Dichlorodifluoromethane	ND		200	46	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Ethylbenzene	ND		40	9.1	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Isopropylbenzene	ND		40	8.6	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Methyl tert-butyl ether	ND		40	6.0	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Methylene Chloride	ND		250	65	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
m-Xylene & p-Xylene	ND		200	15	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
n-Butylbenzene	ND		150	8.0	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
N-Propylbenzene	ND		40	6.9	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
o-Xylene	ND		60	13	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
sec-Butylbenzene	ND		40	8.6	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Styrene	ND		40	6.1	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
t-Butylbenzene	ND		40	7.7	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Toluene	ND		150	14	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
trans-1,2-Dichloroethene	ND		60	15	ug/Kg		09/04/19 12:48	09/04/19 13:01	1
Trichlorofluoromethane	ND		200	11	ug/Kg		09/04/19 12:48	09/04/19 13:01	1

Surrogate	%Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		80 - 121	09/04/19 12:48	09/04/19 13:01	1
4-Bromofluorobenzene (Surr)	100		80 - 120	09/04/19 12:48	09/04/19 13:01	1
Dibromofluoromethane (Surr)	99		80 - 120	09/04/19 12:48	09/04/19 13:01	1
Toluene-d8 (Surr)	105		80 - 120	09/04/19 12:48	09/04/19 13:01	1
Trifluorotoluene (Surr)	96		80 - 120	09/04/19 12:48	09/04/19 13:01	1

Lab Sample ID: LCS 580-310196/23-A

Matrix: Solid

Analysis Batch: 310228

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310196

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,1,1-Trichloroethane	800	849		ug/Kg		106	69 - 150
1,1-Dichloroethane	800	798		ug/Kg		100	70 - 135
1,1-Dichloropropene	800	837		ug/Kg		105	69 - 150
1,2,3-Trichlorobenzene	800	803		ug/Kg		100	62 - 136
1,2,3-Trichloropropane	800	878		ug/Kg		110	70 - 127
1,2,4-Trichlorobenzene	800	826		ug/Kg		103	68 - 131
1,2,4-Trimethylbenzene	800	856		ug/Kg		107	73 - 127
1,2-Dibromo-3-Chloropropane	800	876		ug/Kg		110	62 - 135
1,2-Dichlorobenzene	800	849		ug/Kg		106	78 - 126

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 580-310196/23-A

Matrix: Solid

Analysis Batch: 310228

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310196

%Rec.

Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2-Dichloropropane	800	796		ug/Kg		99	65 - 136
1,3,5-Trimethylbenzene	800	880		ug/Kg		110	72 - 136
1,3-Dichlorobenzene	800	845		ug/Kg		106	78 - 122
1,3-Dichloropropane	800	806		ug/Kg		101	75 - 120
2,2-Dichloropropane	800	859		ug/Kg		107	62 - 150
2-Butanone	4000	4080		ug/Kg		102	55 - 143
2-Chlorotoluene	800	853		ug/Kg		107	77 - 127
4-Chlorotoluene	800	872		ug/Kg		109	78 - 126
4-Isopropyltoluene	800	883		ug/Kg		110	71 - 142
4-Methyl-2-pentanone	4000	3580		ug/Kg		90	68 - 125
Acetone	4000	4260		ug/Kg		106	25 - 150
Bromobenzene	800	848		ug/Kg		106	78 - 126
Bromochloromethane	800	795		ug/Kg		99	76 - 131
Carbon disulfide	800	823		ug/Kg		103	68 - 150
Carbon tetrachloride	800	878		ug/Kg		110	66 - 150
Chlorobenzene	800	854		ug/Kg		107	80 - 123
Chloroethane	800	772		ug/Kg		96	31 - 150
Chloromethane	800	785		ug/Kg		98	43 - 150
cis-1,2-Dichloroethene	800	857		ug/Kg		107	68 - 143
Dichlorodifluoromethane	800	667		ug/Kg		83	10 - 150
Ethylbenzene	800	866		ug/Kg		108	80 - 135
Isopropylbenzene	800	883		ug/Kg		110	74 - 140
Methyl tert-butyl ether	800	781		ug/Kg		98	68 - 132
Methylene Chloride	800	812		ug/Kg		101	54 - 149
m-Xylene & p-Xylene	800	856		ug/Kg		107	80 - 132
n-Butylbenzene	800	897		ug/Kg		112	69 - 143
N-Propylbenzene	800	880		ug/Kg		110	74 - 143
o-Xylene	800	830		ug/Kg		104	80 - 125
sec-Butylbenzene	800	918		ug/Kg		115	77 - 143
Styrene	800	848		ug/Kg		106	79 - 129
t-Butylbenzene	800	917		ug/Kg		115	72 - 144
Toluene	800	846		ug/Kg		106	75 - 137
trans-1,2-Dichloroethene	800	806		ug/Kg		101	61 - 150
Trichlorofluoromethane	800	865		ug/Kg		108	48 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		80 - 121
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	98		80 - 120
Toluene-d8 (Surr)	101		80 - 120
Trifluorotoluene (Surr)	99		80 - 120

Lab Sample ID: LCSD 580-310196/24-A

Matrix: Solid

Analysis Batch: 310228

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 310196

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	RPD	RPD Limit
1,1,1-Trichloroethane	800	834		ug/Kg		104	69 - 150	2 14

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-310196/24-A

Matrix: Solid

Analysis Batch: 310228

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 310196

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane	800	781		ug/Kg		98	70 - 135	2	21
1,1-Dichloropropene	800	830		ug/Kg		104	69 - 150	1	11
1,2,3-Trichlorobenzene	800	868		ug/Kg		109	62 - 136	8	34
1,2,3-Trichloropropane	800	914		ug/Kg		114	70 - 127	4	16
1,2,4-Trichlorobenzene	800	863		ug/Kg		108	68 - 131	4	29
1,2,4-Trimethylbenzene	800	871		ug/Kg		109	73 - 127	2	20
1,2-Dibromo-3-Chloropropane	800	954		ug/Kg		119	62 - 135	8	25
1,2-Dichlorobenzene	800	879		ug/Kg		110	78 - 126	3	21
1,2-Dichloropropane	800	795		ug/Kg		99	65 - 136	0	13
1,3,5-Trimethylbenzene	800	887		ug/Kg		111	72 - 136	1	21
1,3-Dichlorobenzene	800	851		ug/Kg		106	78 - 122	1	20
1,3-Dichloropropane	800	828		ug/Kg		104	75 - 120	3	18
2,2-Dichloropropane	800	795		ug/Kg		99	62 - 150	8	20
2-Butanone	4000	4690		ug/Kg		117	55 - 143	14	31
2-Chlorotoluene	800	871		ug/Kg		109	77 - 127	2	16
4-Chlorotoluene	800	869		ug/Kg		109	78 - 126	0	16
4-Isopropyltoluene	800	900		ug/Kg		113	71 - 142	2	23
4-Methyl-2-pentanone	4000	4260		ug/Kg		107	68 - 125	17	20
Acetone	4000	4530		ug/Kg		113	25 - 150	6	39
Bromobenzene	800	847		ug/Kg		106	78 - 126	0	19
Bromochloromethane	800	785		ug/Kg		98	76 - 131	1	15
Carbon disulfide	800	816		ug/Kg		102	68 - 150	1	27
Carbon tetrachloride	800	852		ug/Kg		107	66 - 150	3	12
Chlorobenzene	800	857		ug/Kg		107	80 - 123	0	18
Chloroethane	800	761		ug/Kg		95	31 - 150	1	31
Chloromethane	800	785		ug/Kg		98	43 - 150	0	26
cis-1,2-Dichloroethene	800	836		ug/Kg		105	68 - 143	2	20
Dichlorodifluoromethane	800	653		ug/Kg		82	10 - 150	2	40
Ethylbenzene	800	871		ug/Kg		109	80 - 135	1	16
Isopropylbenzene	800	890		ug/Kg		111	74 - 140	1	17
Methyl tert-butyl ether	800	798		ug/Kg		100	68 - 132	2	25
Methylene Chloride	800	811		ug/Kg		101	54 - 149	0	30
m-Xylene & p-Xylene	800	865		ug/Kg		108	80 - 132	1	20
n-Butylbenzene	800	920		ug/Kg		115	69 - 143	2	26
N-Propylbenzene	800	866		ug/Kg		108	74 - 143	2	21
o-Xylene	800	836		ug/Kg		105	80 - 125	1	14
sec-Butylbenzene	800	921		ug/Kg		115	77 - 143	0	24
Styrene	800	846		ug/Kg		106	79 - 129	0	15
t-Butylbenzene	800	920		ug/Kg		115	72 - 144	0	24
Toluene	800	863		ug/Kg		108	75 - 137	2	20
trans-1,2-Dichloroethene	800	810		ug/Kg		101	61 - 150	0	22
Trichlorofluoromethane	800	821		ug/Kg		103	48 - 150	5	40

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	99		80 - 121
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	97		80 - 120
Toluene-d8 (Surr)	103		80 - 120

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 580-310196/24-A

Matrix: Solid

Analysis Batch: 310228

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits
Trifluorotoluene (Surr)			99		80 - 120

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 310196

Lab Sample ID: MB 580-311029/1-A

Matrix: Solid

Analysis Batch: 311062

Analyte	MB	MB	Result		Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND					150	8.0	ug/Kg		09/11/19 08:00	09/12/19 01:00	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)			99		80 - 121
4-Bromofluorobenzene (Surr)			95		80 - 120
Dibromofluoromethane (Surr)			99		80 - 120
Toluene-d8 (Surr)			110		80 - 120
Trifluorotoluene (Surr)			93		80 - 120

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 311029

Lab Sample ID: LCS 580-311029/2-A

Matrix: Solid

Analysis Batch: 311062

Analyte	LCS	LCS	Spike Added		Result	Qualifier	Unit	D	%Rec.	Prepared	Analyzed	Dil Fac
n-Butylbenzene	800				929		ug/Kg		116	09/11/19 08:00	09/12/19 01:00	1

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)			101		80 - 121
4-Bromofluorobenzene (Surr)			96		80 - 120
Dibromofluoromethane (Surr)			98		80 - 120
Toluene-d8 (Surr)			109		80 - 120
Trifluorotoluene (Surr)			93		80 - 120

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 311029

Lab Sample ID: LCSD 580-311029/3-A

Matrix: Solid

Analysis Batch: 311062

Analyte	LCS	LCS	Spike Added		Result	Qualifier	Unit	D	%Rec.	Prepared	Analyzed	RPD
n-Butylbenzene	800				970		ug/Kg		121	09/11/19 08:00	09/12/19 01:00	4

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)			102		80 - 121
4-Bromofluorobenzene (Surr)			95		80 - 120
Dibromofluoromethane (Surr)			97		80 - 120
Toluene-d8 (Surr)			107		80 - 120
Trifluorotoluene (Surr)			92		80 - 120

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 311029

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-309975/1-A

Matrix: Solid

Analysis Batch: 309985

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309975

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	0.28	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
1,1,2,2-Tetrachloroethane	ND		10	1.4	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
1,1,2-Trichloroethane	ND		5.0	0.46	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
1,1-Dichloroethene	ND		5.0	0.62	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
1,2-Dibromoethane	ND		5.0	0.45	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
1,2-Dichloroethane	ND		5.0	0.63	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
1,4-Dichlorobenzene	ND		5.0	0.32	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Benzene	ND		5.0	0.42	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Bromodichloromethane	ND		5.0	0.32	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Bromoform	ND		5.0	1.1	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Bromomethane	ND		5.0	0.74	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Chloroform	1.29	J	5.0	0.30	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
cis-1,3-Dichloropropene	ND		5.0	0.37	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Dibromochloromethane	ND		5.0	0.57	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Dibromomethane	ND		5.0	0.59	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Hexachlorobutadiene	2.16	J	5.0	0.66	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Naphthalene	3.48	J	5.0	0.91	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Tetrachloroethene	ND		5.0	0.63	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
trans-1,3-Dichloropropene	ND		5.0	0.34	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Trichloroethene	ND		5.0	0.43	ug/Kg	09/01/19 13:40	09/02/19 04:09		1
Vinyl chloride	ND		20	2.4	ug/Kg	09/01/19 13:40	09/02/19 04:09		1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	125	X	81 - 121	09/01/19 13:40	09/02/19 04:09	1
4-Bromofluorobenzene (Surr)	91		79 - 120	09/01/19 13:40	09/02/19 04:09	1
Dibromofluoromethane (Surr)	133	X	78 - 118	09/01/19 13:40	09/02/19 04:09	1
Toluene-d8 (Surr)	100		79 - 119	09/01/19 13:40	09/02/19 04:09	1
Trifluorotoluene (Surr)	140		52 - 152	09/01/19 13:40	09/02/19 04:09	1

Lab Sample ID: LCS 580-309975/2-A

Matrix: Solid

Analysis Batch: 309985

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309975

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,1,1,2-Tetrachloroethane	200	195		ug/Kg		98	65 - 123	
1,1,2,2-Tetrachloroethane	200	152		ug/Kg		76	65 - 125	
1,1,2-Trichloroethane	200	136	*	ug/Kg		68	69 - 117	
1,1-Dichloroethene	200	245		ug/Kg		122	58 - 123	
1,2-Dibromoethane	200	185		ug/Kg		92	69 - 119	
1,2-Dichloroethane	200	179		ug/Kg		89	71 - 121	
1,4-Dichlorobenzene	200	195		ug/Kg		97	71 - 117	
Benzene	200	156		ug/Kg		78	70 - 118	
Bromodichloromethane	200	195		ug/Kg		97	75 - 119	
Bromoform	200	248		ug/Kg		124	50 - 124	
Bromomethane	200	144		ug/Kg		72	41 - 148	
Chloroform	200	204		ug/Kg		102	72 - 125	
cis-1,3-Dichloropropene	200	168		ug/Kg		84	69 - 129	
Dibromochloromethane	200	214		ug/Kg		107	64 - 129	

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-309975/2-A

Matrix: Solid

Analysis Batch: 309985

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309975

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Dibromomethane	200	230		ug/Kg		115	64 - 126
Hexachlorobutadiene	200	230		ug/Kg		115	58 - 128
Naphthalene	200	139		ug/Kg		69	45 - 141
Tetrachloroethene	200	227		ug/Kg		113	63 - 123
trans-1,3-Dichloropropene	200	180		ug/Kg		90	65 - 129
Trichloroethene	200	208		ug/Kg		104	68 - 118
Vinyl chloride	200	245		ug/Kg		122	43 - 131

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	105		81 - 121
4-Bromofluorobenzene (Surr)	110		79 - 120
Dibromofluoromethane (Surr)	116		78 - 118
Toluene-d8 (Surr)	79		79 - 119
Trifluorotoluene (Surr)	96		52 - 152

Lab Sample ID: LCSD 580-309975/3-A

Matrix: Solid

Analysis Batch: 309985

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 309975

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1,2-Tetrachloroethane	200	208		ug/Kg		104	65 - 123	6	20
1,1,2,2-Tetrachloroethane	200	166		ug/Kg		83	65 - 125	9	22
1,1,2-Trichloroethane	200	166	*	ug/Kg		83	69 - 117	20	18
1,1-Dichloroethene	200	316	*	ug/Kg		158	58 - 123	25	23
1,2-Dibromoethane	200	210		ug/Kg		105	69 - 119	13	15
1,2-Dichloroethane	200	226	*	ug/Kg		113	71 - 121	24	18
1,4-Dichlorobenzene	200	203		ug/Kg		101	71 - 117	4	18
Benzene	200	216	*	ug/Kg		108	70 - 118	32	19
Bromodichloromethane	200	246	*	ug/Kg		123	75 - 119	23	19
Bromoform	200	247		ug/Kg		124	50 - 124	0	16
Bromomethane	200	227	*	ug/Kg		113	41 - 148	44	29
Chloroform	200	255	*	ug/Kg		128	72 - 125	22	17
cis-1,3-Dichloropropene	200	220	*	ug/Kg		110	69 - 129	27	19
Dibromochloromethane	200	221		ug/Kg		110	64 - 129	3	14
Dibromomethane	200	306	*	ug/Kg		153	64 - 126	29	18
Hexachlorobutadiene	200	233		ug/Kg		116	58 - 128	1	29
Naphthalene	200	153		ug/Kg		77	45 - 141	10	34
Tetrachloroethene	200	228		ug/Kg		114	63 - 123	1	20
trans-1,3-Dichloropropene	200	245	*	ug/Kg		122	65 - 129	30	20
Trichloroethene	200	274	*	ug/Kg		137	68 - 118	27	17
Vinyl chloride	200	281	*	ug/Kg		141	43 - 131	14	40

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	124	X	81 - 121
4-Bromofluorobenzene (Surr)	110		79 - 120
Dibromofluoromethane (Surr)	133	X	78 - 118
Toluene-d8 (Surr)	95		79 - 119
Trifluorotoluene (Surr)	139		52 - 152

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-310134/14-A

Matrix: Solid

Analysis Batch: 310106

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310134

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	0.28	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
1,1,2,2-Tetrachloroethane	ND		10	1.4	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
1,1,2-Trichloroethane	ND		5.0	0.46	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
1,1-Dichloroethene	ND		5.0	0.62	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
1,2-Dibromoethane	ND		5.0	0.45	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
1,2-Dichloroethane	ND		5.0	0.63	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
1,4-Dichlorobenzene	ND		5.0	0.32	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Benzene	ND		5.0	0.42	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Bromodichloromethane	ND		5.0	0.32	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Bromoform	ND		5.0	1.1	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Bromomethane	ND		5.0	0.74	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Chloroform	1.25 J		5.0	0.30	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
cis-1,3-Dichloropropene	ND		5.0	0.37	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Dibromochloromethane	ND		5.0	0.57	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Dibromomethane	ND		5.0	0.59	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Hexachlorobutadiene	ND		5.0	0.66	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Naphthalene	ND		5.0	0.91	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Tetrachloroethene	ND		5.0	0.63	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
trans-1,3-Dichloropropene	ND		5.0	0.34	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Trichloroethene	ND		5.0	0.43	ug/Kg	09/03/19 17:49	09/04/19 13:16		1
Vinyl chloride	ND		20	2.4	ug/Kg	09/03/19 17:49	09/04/19 13:16		1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	131	X	81 - 121	09/03/19 17:49	09/04/19 13:16	1
4-Bromofluorobenzene (Surr)	118		79 - 120	09/03/19 17:49	09/04/19 13:16	1
Dibromofluoromethane (Surr)	112		78 - 118	09/03/19 17:49	09/04/19 13:16	1
Toluene-d8 (Surr)	106		79 - 119	09/03/19 17:49	09/04/19 13:16	1
Trifluorotoluene (Surr)	94		52 - 152	09/03/19 17:49	09/04/19 13:16	1

Lab Sample ID: LCS 580-310134/15-A

Matrix: Solid

Analysis Batch: 310106

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310134

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limts
1,1,1,2-Tetrachloroethane	200	212		ug/Kg		106	65 - 123
1,1,2,2-Tetrachloroethane	200	211		ug/Kg		105	65 - 125
1,1,2-Trichloroethane	200	204		ug/Kg		102	69 - 117
1,1-Dichloroethene	200	247		ug/Kg		123	58 - 123
1,2-Dibromoethane	200	217		ug/Kg		109	69 - 119
1,2-Dichloroethane	200	243 *		ug/Kg		122	71 - 121
1,4-Dichlorobenzene	200	194		ug/Kg		97	71 - 117
Benzene	200	199		ug/Kg		99	70 - 118
Bromodichloromethane	200	225		ug/Kg		112	75 - 119
Bromoform	200	265 *		ug/Kg		132	50 - 124
Bromomethane	200	209		ug/Kg		104	41 - 148
Chloroform	200	236		ug/Kg		118	72 - 125
cis-1,3-Dichloropropene	200	213		ug/Kg		106	69 - 129
Dibromochloromethane	200	221		ug/Kg		111	64 - 129

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-310134/15-A

Matrix: Solid

Analysis Batch: 310106

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310134

%Rec.

Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Dibromomethane	200	219		ug/Kg		110	64 - 126
Hexachlorobutadiene	200	224		ug/Kg		112	58 - 128
Naphthalene	200	136		ug/Kg		68	45 - 141
Tetrachloroethene	200	215		ug/Kg		108	63 - 123
trans-1,3-Dichloropropene	200	234		ug/Kg		117	65 - 129
Trichloroethene	200	193		ug/Kg		97	68 - 118
Vinyl chloride	200	373	*	ug/Kg		186	43 - 131

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	131	X	81 - 121
4-Bromofluorobenzene (Surr)	107		79 - 120
Dibromofluoromethane (Surr)	113		78 - 118
Toluene-d8 (Surr)	101		79 - 119
Trifluorotoluene (Surr)	96		52 - 152

Lab Sample ID: MB 580-310305/1-A

Matrix: Solid

Analysis Batch: 310347

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310305

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	0.28	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
1,1,2,2-Tetrachloroethane	ND		10	1.4	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
1,1,2-Trichloroethane	ND		5.0	0.46	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
1,1-Dichloroethene	ND		5.0	0.62	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
1,2-Dibromoethane	ND		5.0	0.45	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
1,2-Dichloroethane	ND		5.0	0.63	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
1,4-Dichlorobenzene	ND		5.0	0.32	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Benzene	ND		5.0	0.42	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Bromodichloromethane	ND		5.0	0.32	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Bromoform	ND		5.0	1.1	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Bromomethane	ND		5.0	0.74	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Chloroform	0.681	J	5.0	0.30	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
cis-1,3-Dichloropropene	0.455	J	5.0	0.37	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Dibromochloromethane	ND		5.0	0.57	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Dibromomethane	ND		5.0	0.59	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Hexachlorobutadiene	ND		5.0	0.66	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Naphthalene	4.65	J	5.0	0.91	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Tetrachloroethene	ND		5.0	0.63	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
trans-1,3-Dichloropropene	ND		5.0	0.34	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Trichloroethene	ND		5.0	0.43	ug/Kg		09/05/19 14:04	09/05/19 18:35	1
Vinyl chloride	ND		20	2.4	ug/Kg		09/05/19 14:04	09/05/19 18:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		81 - 121			1
4-Bromofluorobenzene (Surr)	105		79 - 120			1
Dibromofluoromethane (Surr)	101		78 - 118			1
Toluene-d8 (Surr)	101		79 - 119			1
Trifluorotoluene (Surr)	101		52 - 152			1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LCS 580-310305/2-A

Matrix: Solid

Analysis Batch: 310347

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310305

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,1,1,2-Tetrachloroethane	200	229		ug/Kg		114	65 - 123	
1,1,2,2-Tetrachloroethane	200	240		ug/Kg		120	65 - 125	
1,1,2-Trichloroethane	200	233		ug/Kg		117	69 - 117	
1,1-Dichloroethene	200	271	*	ug/Kg		136	58 - 123	
1,2-Dibromoethane	200	231		ug/Kg		116	69 - 119	
1,2-Dichloroethane	200	193		ug/Kg		96	71 - 121	
1,4-Dichlorobenzene	200	240	*	ug/Kg		120	71 - 117	
Benzene	200	247	*	ug/Kg		123	70 - 118	
Bromodichloromethane	200	212		ug/Kg		106	75 - 119	
Bromoform	200	209		ug/Kg		104	50 - 124	
Bromomethane	200	209		ug/Kg		105	41 - 148	
Chloroform	200	226		ug/Kg		113	72 - 125	
cis-1,3-Dichloropropene	200	223		ug/Kg		111	69 - 129	
Dibromochloromethane	200	220		ug/Kg		110	64 - 129	
Dibromomethane	200	221		ug/Kg		110	64 - 126	
Hexachlorobutadiene	200	233		ug/Kg		117	58 - 128	
Naphthalene	200	279		ug/Kg		140	45 - 141	
Tetrachloroethene	200	260	*	ug/Kg		130	63 - 123	
trans-1,3-Dichloropropene	200	202		ug/Kg		101	65 - 129	
Trichloroethene	200	248	*	ug/Kg		124	68 - 118	
Vinyl chloride	200	163		ug/Kg		82	43 - 131	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	83		81 - 121
4-Bromofluorobenzene (Surr)	98		79 - 120
Dibromofluoromethane (Surr)	96		78 - 118
Toluene-d8 (Surr)	103		79 - 119
Trifluorotoluene (Surr)	95		52 - 152

Lab Sample ID: LCSD 580-310305/3-A

Matrix: Solid

Analysis Batch: 310347

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 310305

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	200	224		ug/Kg		112	65 - 123	2	20
1,1,2,2-Tetrachloroethane	200	227		ug/Kg		113	65 - 125	6	22
1,1,2-Trichloroethane	200	227		ug/Kg		113	69 - 117	3	18
1,1-Dichloroethene	200	268	*	ug/Kg		134	58 - 123	1	23
1,2-Dibromoethane	200	223		ug/Kg		112	69 - 119	3	15
1,2-Dichloroethane	200	187		ug/Kg		93	71 - 121	3	18
1,4-Dichlorobenzene	200	229		ug/Kg		115	71 - 117	5	18
Benzene	200	243	*	ug/Kg		121	70 - 118	2	19
Bromodichloromethane	200	209		ug/Kg		104	75 - 119	2	19
Bromoform	200	202		ug/Kg		101	50 - 124	3	16
Bromomethane	200	205		ug/Kg		103	41 - 148	2	29
Chloroform	200	223		ug/Kg		112	72 - 125	1	17
cis-1,3-Dichloropropene	200	219		ug/Kg		109	69 - 129	2	19
Dibromochloromethane	200	214		ug/Kg		107	64 - 129	3	14

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-310305/3-A

Matrix: Solid

Analysis Batch: 310347

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 310305

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dibromomethane	200	215		ug/Kg		107	64 - 126	3	18
Hexachlorobutadiene	200	227		ug/Kg		114	58 - 128	3	29
Naphthalene	200	283	*	ug/Kg		142	45 - 141	1	34
Tetrachloroethene	200	250	*	ug/Kg		125	63 - 123	4	20
trans-1,3-Dichloropropene	200	196		ug/Kg		98	65 - 129	3	20
Trichloroethene	200	245	*	ug/Kg		122	68 - 118	1	17
Vinyl chloride	200	155		ug/Kg		78	43 - 131	5	40

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	83		81 - 121
4-Bromofluorobenzene (Surr)	94		79 - 120
Dibromofluoromethane (Surr)	96		78 - 118
Toluene-d8 (Surr)	103		79 - 119
Trifluorotoluene (Surr)	96		52 - 152

Lab Sample ID: MB 580-311201/1-A

Matrix: Solid

Analysis Batch: 311181

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 311201

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	0.28	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
1,1,2,2-Tetrachloroethane	ND		10	1.4	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
1,1,2-Trichloroethane	ND		5.0	0.46	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
1,1-Dichloroethene	ND		5.0	0.62	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
1,2-Dibromoethane	ND		5.0	0.45	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
1,2-Dichloroethane	ND		5.0	0.63	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
1,4-Dichlorobenzene	ND		5.0	0.32	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Benzene	ND		5.0	0.42	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Bromodichloromethane	ND		5.0	0.32	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Bromoform	ND		5.0	1.1	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Bromomethane	ND		5.0	0.74	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Chloroform	0.409	J	5.0	0.30	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
cis-1,3-Dichloropropene	ND		5.0	0.37	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Dibromochloromethane	ND		5.0	0.57	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Dibromomethane	ND		5.0	0.59	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Hexachlorobutadiene	7.48		5.0	0.66	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Naphthalene	12.6		5.0	0.91	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Tetrachloroethene	ND		5.0	0.63	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
trans-1,3-Dichloropropene	ND		5.0	0.34	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Trichloroethene	ND		5.0	0.43	ug/Kg		09/14/19 14:31	09/14/19 18:20	1
Vinyl chloride	ND		20	2.4	ug/Kg		09/14/19 14:31	09/14/19 18:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		81 - 121			1
4-Bromofluorobenzene (Surr)	102		79 - 120			1
Dibromofluoromethane (Surr)	99		78 - 118			1
Toluene-d8 (Surr)	101		79 - 119			1
Trifluorotoluene (Surr)	100		52 - 152			1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS)

Lab Sample ID: LCS 580-311201/2-A

Matrix: Solid

Analysis Batch: 311181

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 311201

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,1,1,2-Tetrachloroethane	200	171		ug/Kg		86	65 - 123	
1,1,2,2-Tetrachloroethane	200	155		ug/Kg		77	65 - 125	
1,1,2-Trichloroethane	200	168		ug/Kg		84	69 - 117	
1,1-Dichloroethene	200	182		ug/Kg		91	58 - 123	
1,2-Dibromoethane	200	162		ug/Kg		81	69 - 119	
1,2-Dichloroethane	200	161		ug/Kg		81	71 - 121	
1,4-Dichlorobenzene	200	175		ug/Kg		87	71 - 117	
Benzene	200	169		ug/Kg		84	70 - 118	
Bromodichloromethane	200	166		ug/Kg		83	75 - 119	
Bromoform	200	154		ug/Kg		77	50 - 124	
Bromomethane	200	207		ug/Kg		104	41 - 148	
Chloroform	200	169		ug/Kg		84	72 - 125	
cis-1,3-Dichloropropene	200	163		ug/Kg		81	69 - 129	
Dibromochloromethane	200	162		ug/Kg		81	64 - 129	
Dibromomethane	200	162		ug/Kg		81	64 - 126	
Hexachlorobutadiene	200	190		ug/Kg		95	58 - 128	
Naphthalene	200	155		ug/Kg		78	45 - 141	
Tetrachloroethene	200	182		ug/Kg		91	63 - 123	
trans-1,3-Dichloropropene	200	161		ug/Kg		80	65 - 129	
Trichloroethene	200	173		ug/Kg		87	68 - 118	
Vinyl chloride	200	189		ug/Kg		95	43 - 131	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		81 - 121
4-Bromofluorobenzene (Surr)	98		79 - 120
Dibromofluoromethane (Surr)	99		78 - 118
Toluene-d8 (Surr)	102		79 - 119
Trifluorotoluene (Surr)	99		52 - 152

Lab Sample ID: LCSD 580-311201/3-A

Matrix: Solid

Analysis Batch: 311181

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 311201

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	200	179		ug/Kg		90	65 - 123	5	20
1,1,2,2-Tetrachloroethane	200	166		ug/Kg		83	65 - 125	7	22
1,1,2-Trichloroethane	200	178		ug/Kg		89	69 - 117	6	18
1,1-Dichloroethene	200	193		ug/Kg		97	58 - 123	6	23
1,2-Dibromoethane	200	172		ug/Kg		86	69 - 119	6	15
1,2-Dichloroethane	200	169		ug/Kg		84	71 - 121	5	18
1,4-Dichlorobenzene	200	182		ug/Kg		91	71 - 117	4	18
Benzene	200	176		ug/Kg		88	70 - 118	4	19
Bromodichloromethane	200	174		ug/Kg		87	75 - 119	5	19
Bromoform	200	166		ug/Kg		83	50 - 124	7	16
Bromomethane	200	204		ug/Kg		102	41 - 148	2	29
Chloroform	200	178		ug/Kg		89	72 - 125	5	17
cis-1,3-Dichloropropene	200	171		ug/Kg		86	69 - 129	5	19
Dibromochloromethane	200	173		ug/Kg		86	64 - 129	6	14

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8260C SIM - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-311201/3-A

Client Sample ID: Lab Control Sample Dup

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 311181

Prep Batch: 311201

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dibromomethane	200	174		ug/Kg		87	64 - 126	7	18
Hexachlorobutadiene	200	201		ug/Kg		101	58 - 128	6	29
Naphthalene	200	175		ug/Kg		87	45 - 141	12	34
Tetrachloroethene	200	193		ug/Kg		97	63 - 123	6	20
trans-1,3-Dichloropropene	200	170		ug/Kg		85	65 - 129	6	20
Trichloroethene	200	180		ug/Kg		90	68 - 118	4	17
Vinyl chloride	200	205		ug/Kg		103	43 - 131	8	40

Surrogate	LCSD	LCSD	Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	98		81 - 121
4-Bromofluorobenzene (Surr)	98		79 - 120
Dibromofluoromethane (Surr)	99		78 - 118
Toluene-d8 (Surr)	102		79 - 119
Trifluorotoluene (Surr)	99		52 - 152

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-310035/1-A

Client Sample ID: Method Blank

Matrix: Solid

Prep Type: Total/NA

Analysis Batch: 310262

Prep Batch: 310035

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	6.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
1,2-Dichlorobenzene	ND		50	12	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
1,3-Dichlorobenzene	ND		50	4.8	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
1,4-Dichlorobenzene	ND		50	8.3	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
1-Methylnaphthalene	ND		30	5.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
2,4,5-Trichlorophenol	ND		200	45	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
2,4-Dichlorophenol	ND		100	15	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
2,4-Dimethylphenol	ND		100	15	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
2-Chloronaphthalene	ND		25	5.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
2-Chlorophenol	ND		200	13	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
2-Methylnaphthalene	ND		50	8.8	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
2-Methylphenol	ND		150	9.8	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
2-Nitroaniline	ND		100	15	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
2-Nitrophenol	ND		200	21	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
3 & 4 Methylphenol	ND		200	15	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
3-Nitroaniline	ND		200	40	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
4-Bromophenyl phenyl ether	ND		200	9.1	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
4-Chloro-3-methylphenol	ND		150	33	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
4-Chlorophenyl phenyl ether	ND		200	6.3	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
4-Nitroaniline	ND		150	50	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
4-Nitrophenol	ND		1500	370	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Acenaphthene	ND		25	5.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Acenaphthylene	ND		25	5.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Anthracene	ND		25	5.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Benzo[a]anthracene	ND		25	5.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Benzo[a]pyrene	ND		60	13	ug/Kg		09/03/19 09:39	09/05/19 11:18	1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-310035/1-A

Matrix: Solid

Analysis Batch: 310262

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310035

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		25	5.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Benzo[g,h,i]perylene	ND		60	9.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Benzo[k]fluoranthene	ND		60	14	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Benzoic acid	ND		2000	580	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Benzyl alcohol	ND		500	77	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Bis(2-chloroethoxy)methane	ND		200	18	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Bis(2-ethylhexyl) phthalate	ND		600	71	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
bis(chloroisopropyl) ether	ND		200	14	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Butyl benzyl phthalate	51.8	J	200	51	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Carbazole	ND		150	8.2	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Chrysene	ND		60	13	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Dibenz(a,h)anthracene	ND		50	12	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Dibenzofuran	ND		150	5.9	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Diethyl phthalate	ND		1500	76	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Dimethyl phthalate	ND		150	13	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Di-n-butyl phthalate	ND		500	57	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Di-n-octyl phthalate	ND		150	57	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Fluoranthene	ND		25	5.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Fluorene	ND		25	5.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Isophorone	ND		150	7.4	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Naphthalene	ND		25	5.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
N-Nitrosodiphenylamine	ND		60	8.0	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Phenanthrene	ND		60	12	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Phenol	ND		150	23	ug/Kg		09/03/19 09:39	09/05/19 11:18	1
Pyrene	ND		60	6.4	ug/Kg		09/03/19 09:39	09/05/19 11:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	54		52 - 125	09/03/19 09:39	09/05/19 11:18	1
2-Fluorobiphenyl	90		57 - 120	09/03/19 09:39	09/05/19 11:18	1
2-Fluorophenol (Surr)	77		60 - 125	09/03/19 09:39	09/05/19 11:18	1
Nitrobenzene-d5 (Surr)	93		62 - 120	09/03/19 09:39	09/05/19 11:18	1
Phenol-d5 (Surr)	86		59 - 120	09/03/19 09:39	09/05/19 11:18	1
Terphenyl-d14 (Surr)	105		58 - 120	09/03/19 09:39	09/05/19 11:18	1

Lab Sample ID: LCS 580-310035/2-A

Matrix: Solid

Analysis Batch: 310262

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 310035

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	1000	941		ug/Kg		94	66 - 120
1,2-Dichlorobenzene	1000	885		ug/Kg		88	62 - 120
1,3-Dichlorobenzene	1000	853		ug/Kg		85	64 - 120
1,4-Dichlorobenzene	1000	832		ug/Kg		83	57 - 120
1-Methylnaphthalene	1000	935		ug/Kg		94	69 - 120
2,4,5-Trichlorophenol	1000	883		ug/Kg		88	64 - 120
2,4-Dichlorophenol	1000	984		ug/Kg		98	63 - 121
2,4-Dimethylphenol	1000	904		ug/Kg		90	37 - 129

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-310035/2-A

Matrix: Solid

Analysis Batch: 310262

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310035

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2-Chloronaphthalene	1000	864		ug/Kg		86	65 - 120
2-Chlorophenol	1000	920		ug/Kg		92	66 - 120
2-Methylnaphthalene	1000	935		ug/Kg		93	65 - 120
2-Methylphenol	1000	913		ug/Kg		91	61 - 120
2-Nitroaniline	1000	947		ug/Kg		95	63 - 126
2-Nitrophenol	1000	1080		ug/Kg		108	58 - 130
3 & 4 Methylphenol	1000	839		ug/Kg		84	60 - 120
3-Nitroaniline	1000	805		ug/Kg		80	34 - 120
4,6-Dinitro-2-methylphenol	2000	2100		ug/Kg		105	13 - 150
4-Bromophenyl phenyl ether	1000	835		ug/Kg		84	65 - 120
4-Chloro-3-methylphenol	1000	778		ug/Kg		78	61 - 120
4-Chlorophenyl phenyl ether	1000	952		ug/Kg		95	64 - 120
4-Nitroaniline	1000	890		ug/Kg		89	49 - 128
4-Nitrophenol	2000	1620		ug/Kg		81	27 - 150
Acenaphthene	1000	846		ug/Kg		85	64 - 120
Acenaphthylene	1000	915		ug/Kg		91	63 - 120
Anthracene	1000	939		ug/Kg		94	67 - 120
Benzo[a]anthracene	1000	1110		ug/Kg		111	66 - 120
Benzo[a]pyrene	1000	1050		ug/Kg		105	72 - 121
Benzo[b]fluoranthene	1000	991		ug/Kg		99	71 - 130
Benzo[g,h,i]perylene	1000	1070		ug/Kg		107	59 - 134
Benzo[k]fluoranthene	1000	1080		ug/Kg		108	68 - 123
Benzoic acid	2000	1110	J	ug/Kg		56	10 - 120
Benzyl alcohol	1000	124	J *	ug/Kg		12	28 - 134
Bis(2-chloroethoxy)methane	1000	863		ug/Kg		86	60 - 120
Bis(2-ethylhexyl) phthalate	1000	1170		ug/Kg		117	59 - 136
bis(chloroisopropyl) ether	1000	1080		ug/Kg		108	42 - 134
Butyl benzyl phthalate	1000	1190		ug/Kg		119	59 - 141
Carbazole	1000	1500	*	ug/Kg		150	70 - 137
Chrysene	1000	1030		ug/Kg		103	63 - 120
Dibenz(a,h)anthracene	1000	1030		ug/Kg		103	59 - 132
Dibenzofuran	1000	940		ug/Kg		94	68 - 120
Diethyl phthalate	1000	1020	J	ug/Kg		102	53 - 126
Dimethyl phthalate	1000	974		ug/Kg		97	66 - 120
Di-n-butyl phthalate	1000	992		ug/Kg		99	59 - 129
Di-n-octyl phthalate	1000	1270		ug/Kg		127	53 - 144
Fluoranthene	1000	1030		ug/Kg		103	69 - 120
Fluorene	1000	885		ug/Kg		89	68 - 121
Indeno[1,2,3-cd]pyrene	1000	1050		ug/Kg		105	52 - 139
Isophorone	1000	942		ug/Kg		94	61 - 128
Naphthalene	1000	839		ug/Kg		84	68 - 120
N-Nitrosodiphenylamine	1000	942		ug/Kg		94	67 - 120
Phenanthrene	1000	905		ug/Kg		91	68 - 120
Phenol	1000	785		ug/Kg		79	59 - 120
Pyrene	1000	1060		ug/Kg		106	73 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surrogate)	87		52 - 125

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-310035/2-A

Matrix: Solid

Analysis Batch: 310262

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310035

Surrogate	LCS	LCS	
	%Recovery	Qualifier	Limits
2-Fluorobiphenyl	93		57 - 120
2-Fluorophenol (Surr)	96		60 - 125
Nitrobenzene-d5 (Surr)	104		62 - 120
Phenol-d5 (Surr)	94		59 - 120
Terphenyl-d14 (Surr)	100		58 - 120

Lab Sample ID: 580-88695-11 MS

Matrix: Solid

Analysis Batch: 310262

Client Sample ID: TS-01-SO

Prep Type: Total/NA

Prep Batch: 310035

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits	%Rec.
	Result	Qualifier	Added	Result	Qualifier					
1,2,4-Trichlorobenzene	ND		1160	1080		ug/Kg	⊗	93	66 - 120	
1,2-Dichlorobenzene	ND		1160	1060		ug/Kg	⊗	92	62 - 120	
1,3-Dichlorobenzene	ND		1160	1020		ug/Kg	⊗	88	64 - 120	
1,4-Dichlorobenzene	ND		1160	1030		ug/Kg	⊗	89	57 - 120	
1-Methylnaphthalene	ND		1160	1100		ug/Kg	⊗	95	69 - 120	
2,4,5-Trichlorophenol	ND		1160	1160		ug/Kg	⊗	100	64 - 120	
2,4-Dichlorophenol	ND		1160	1220		ug/Kg	⊗	106	63 - 121	
2,4-Dimethylphenol	ND		1160	1180		ug/Kg	⊗	102	37 - 129	
2-Chloronaphthalene	ND		1160	1040		ug/Kg	⊗	90	65 - 120	
2-Chlorophenol	ND		1160	1150		ug/Kg	⊗	99	66 - 120	
2-Methylnaphthalene	ND		1160	1090		ug/Kg	⊗	94	65 - 120	
2-Methylphenol	ND		1160	1000		ug/Kg	⊗	87	61 - 120	
2-Nitroaniline	ND		1160	1150		ug/Kg	⊗	100	63 - 126	
2-Nitrophenol	ND		1160	1330		ug/Kg	⊗	115	58 - 130	
3 & 4 Methylphenol	ND		1160	1080		ug/Kg	⊗	93	60 - 120	
3-Nitroaniline	ND		1160	741		ug/Kg	⊗	64	34 - 120	
4,6-Dinitro-2-methylphenol	ND F2		2320	1820		ug/Kg	⊗	79	13 - 150	
4-Bromophenyl phenyl ether	ND		1160	1070		ug/Kg	⊗	92	65 - 120	
4-Chloro-3-methylphenol	ND		1160	1090		ug/Kg	⊗	94	61 - 120	
4-Chlorophenyl phenyl ether	ND		1160	1090		ug/Kg	⊗	94	64 - 120	
4-Nitroaniline	ND F2		1160	1120		ug/Kg	⊗	96	49 - 128	
4-Nitrophenol	ND		2320	2290		ug/Kg	⊗	99	27 - 150	
Acenaphthene	ND		1160	1030		ug/Kg	⊗	89	64 - 120	
Acenaphthylene	ND		1160	1140		ug/Kg	⊗	99	63 - 120	
Anthracene	ND		1160	1150		ug/Kg	⊗	99	67 - 120	
Benzo[a]anthracene	ND		1160	1250		ug/Kg	⊗	108	66 - 120	
Benzo[a]pyrene	ND		1160	1110		ug/Kg	⊗	96	72 - 121	
Benzo[b]fluoranthene	ND		1160	1070		ug/Kg	⊗	92	71 - 130	
Benzo[g,h,i]perylene	ND		1160	1140		ug/Kg	⊗	98	59 - 134	
Benzo[k]fluoranthene	ND		1160	1100		ug/Kg	⊗	95	68 - 123	
Benzoic acid	ND F1		2320	2940 F1		ug/Kg	⊗	127	10 - 120	
Benzyl alcohol	ND F1 *		1160	206 J F1		ug/Kg	⊗	18	28 - 134	
Bis(2-chloroethoxy)methane	ND		1160	1120		ug/Kg	⊗	97	60 - 120	
Bis(2-ethylhexyl) phthalate	ND		1160	1490		ug/Kg	⊗	128	59 - 136	
bis(chloroisopropyl) ether	ND		1160	1290		ug/Kg	⊗	111	42 - 134	
Butyl benzyl phthalate	66 J B		1160	1450		ug/Kg	⊗	119	59 - 141	
Carbazole	ND F1 *		1160	1930 F1		ug/Kg	⊗	167	70 - 137	

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-88695-11 MS

Matrix: Solid

Analysis Batch: 310262

Client Sample ID: TS-01-SO

Prep Type: Total/NA

Prep Batch: 310035

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.	Limits
Chrysene	ND		1160	1130		ug/Kg	⊗	97	63 - 120	
Dibenz(a,h)anthracene	ND		1160	1010		ug/Kg	⊗	87	59 - 132	
Dibenzofuran	ND		1160	1140		ug/Kg	⊗	99	68 - 120	
Diethyl phthalate	ND		1160	1240	J	ug/Kg	⊗	107	53 - 126	
Dimethyl phthalate	ND		1160	1200		ug/Kg	⊗	104	66 - 120	
Di-n-butyl phthalate	ND		1160	1300		ug/Kg	⊗	112	59 - 129	
Di-n-octyl phthalate	ND		1160	1590		ug/Kg	⊗	138	53 - 144	
Fluoranthene	ND		1160	1250		ug/Kg	⊗	108	69 - 120	
Fluorene	ND		1160	1060		ug/Kg	⊗	91	68 - 121	
Indeno[1,2,3-cd]pyrene	ND		1160	1140		ug/Kg	⊗	99	52 - 139	
Isophorone	ND		1160	1230		ug/Kg	⊗	106	61 - 128	
Naphthalene	ND		1160	1020		ug/Kg	⊗	88	68 - 120	
N-Nitrosodiphenylamine	ND		1160	1190		ug/Kg	⊗	103	67 - 120	
Phenanthrene	ND		1160	1120		ug/Kg	⊗	96	68 - 120	
Phenol	ND		1160	1020		ug/Kg	⊗	88	59 - 120	
Pyrene	ND		1160	1300		ug/Kg	⊗	112	73 - 120	
Surrogate	MS %Recovery	MS Qualifier		MS Limits						
2,4,6-Tribromophenol (Surr)	102			52 - 125						
2-Fluorobiphenyl	93			57 - 120						
2-Fluorophenol (Surr)	102			60 - 125						
Nitrobenzene-d5 (Surr)	107			62 - 120						
Phenol-d5 (Surr)	100			59 - 120						
Terphenyl-d14 (Surr)	103			58 - 120						

Lab Sample ID: 580-88695-11 MSD

Matrix: Solid

Analysis Batch: 310262

Client Sample ID: TS-01-SO

Prep Type: Total/NA

Prep Batch: 310035

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.	RPD	Limit
1,2,4-Trichlorobenzene	ND		1120	1050		ug/Kg	⊗	94	66 - 120	3	18
1,2-Dichlorobenzene	ND		1120	914		ug/Kg	⊗	82	62 - 120	15	30
1,3-Dichlorobenzene	ND		1120	862		ug/Kg	⊗	77	64 - 120	16	29
1,4-Dichlorobenzene	ND		1120	868		ug/Kg	⊗	78	57 - 120	17	35
1-Methylnaphthalene	ND		1120	1060		ug/Kg	⊗	95	69 - 120	4	24
2,4,5-Trichlorophenol	ND		1120	1140		ug/Kg	⊗	102	64 - 120	2	23
2,4-Dichlorophenol	ND		1120	1130		ug/Kg	⊗	101	63 - 121	8	19
2,4-Dimethylphenol	ND		1120	1060		ug/Kg	⊗	95	37 - 129	10	40
2-Chloronaphthalene	ND		1120	972		ug/Kg	⊗	87	65 - 120	7	21
2-Chlorophenol	ND		1120	989		ug/Kg	⊗	88	66 - 120	15	32
2-Methylnaphthalene	ND		1120	1030		ug/Kg	⊗	92	65 - 120	6	21
2-Methylphenol	ND		1120	1020		ug/Kg	⊗	91	61 - 120	2	40
2-Nitroaniline	ND		1120	1110		ug/Kg	⊗	99	63 - 126	4	16
2-Nitrophenol	ND		1120	1240		ug/Kg	⊗	111	58 - 130	8	30
3 & 4 Methylphenol	ND		1120	981		ug/Kg	⊗	88	60 - 120	10	36
3-Nitroaniline	ND		1120	745		ug/Kg	⊗	67	34 - 120	0	25
4,6-Dinitro-2-methylphenol	ND	F2	2230	1200	F2	ug/Kg	⊗	54	13 - 150	41	40
4-Bromophenyl phenyl ether	ND		1120	1010		ug/Kg	⊗	90	65 - 120	6	32

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-88695-11 MSD

Matrix: Solid

Analysis Batch: 310262

Client Sample ID: TS-01-SO

Prep Type: Total/NA

Prep Batch: 310035

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloro-3-methylphenol	ND		1120	985		ug/Kg	⊗	88	61 - 120	10	25
4-Chlorophenyl phenyl ether	ND		1120	1070		ug/Kg	⊗	96	64 - 120	2	21
4-Nitroaniline	ND F2		1120	850	F2	ug/Kg	⊗	76	49 - 128	27	23
4-Nitrophenol	ND		2230	2230		ug/Kg	⊗	100	27 - 150	3	31
Acenaphthene	ND		1120	962		ug/Kg	⊗	86	64 - 120	7	19
Acenaphthylene	ND		1120	1040		ug/Kg	⊗	93	63 - 120	9	18
Anthracene	ND		1120	1120		ug/Kg	⊗	101	67 - 120	2	28
Benzo[a]anthracene	ND		1120	1330		ug/Kg	⊗	119	66 - 120	6	21
Benzo[a]pyrene	ND		1120	1040		ug/Kg	⊗	93	72 - 121	6	27
Benzo[b]fluoranthene	ND		1120	1040		ug/Kg	⊗	93	71 - 130	3	25
Benzo[g,h,i]perylene	ND		1120	1060		ug/Kg	⊗	94	59 - 134	8	26
Benzo[k]fluoranthene	ND		1120	981		ug/Kg	⊗	88	68 - 123	11	18
Benzoic acid	ND F1		2230	2920	F1	ug/Kg	⊗	131	10 - 120	1	40
Benzyl alcohol	ND F1 *		1120	222	J F1	ug/Kg	⊗	20	28 - 134	7	40
Bis(2-chloroethoxy)methane	ND		1120	968		ug/Kg	⊗	87	60 - 120	15	33
Bis(2-ethylhexyl) phthalate	ND		1120	1500		ug/Kg	⊗	134	59 - 136	1	25
bis(chloroisopropyl) ether	ND		1120	1110		ug/Kg	⊗	99	42 - 134	15	33
Butyl benzyl phthalate	66 J B		1120	1500		ug/Kg	⊗	129	59 - 141	4	27
Carbazole	ND F1 *		1120	1830	F1	ug/Kg	⊗	164	70 - 137	6	24
Chrysene	ND		1120	1130		ug/Kg	⊗	101	63 - 120	0	27
Dibenz(a,h)anthracene	ND		1120	1020		ug/Kg	⊗	91	59 - 132	1	29
Dibenzofuran	ND		1120	1080		ug/Kg	⊗	97	68 - 120	6	18
Diethyl phthalate	ND		1120	1220	J	ug/Kg	⊗	109	53 - 126	1	22
Dimethyl phthalate	ND		1120	1150		ug/Kg	⊗	103	66 - 120	4	21
Di-n-butyl phthalate	ND		1120	1240		ug/Kg	⊗	111	59 - 129	5	26
Di-n-octyl phthalate	ND		1120	1500		ug/Kg	⊗	134	53 - 144	6	18
Fluoranthene	ND		1120	1200		ug/Kg	⊗	108	69 - 120	4	21
Fluorene	ND		1120	1030		ug/Kg	⊗	92	68 - 121	3	17
Indeno[1,2,3-cd]pyrene	ND		1120	1090		ug/Kg	⊗	98	52 - 139	5	30
Isophorone	ND		1120	1060		ug/Kg	⊗	95	61 - 128	14	31
Naphthalene	ND		1120	927		ug/Kg	⊗	83	68 - 120	9	15
N-Nitrosodiphenylamine	ND		1120	1130		ug/Kg	⊗	102	67 - 120	5	30
Phenanthrene	ND		1120	1050		ug/Kg	⊗	94	68 - 120	6	27
Phenol	ND		1120	889		ug/Kg	⊗	80	59 - 120	14	30
Pyrene	ND		1120	1240		ug/Kg	⊗	111	73 - 120	5	24

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol (Surr)	93		52 - 125
2-Fluorobiphenyl	91		57 - 120
2-Fluorophenol (Surr)	92		60 - 125
Nitrobenzene-d5 (Surr)	106		62 - 120
Phenol-d5 (Surr)	93		59 - 120
Terphenyl-d14 (Surr)	102		58 - 120

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-310147/1-A

Matrix: Solid

Analysis Batch: 310468

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310147

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		50	6.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
1,2-Dichlorobenzene	ND		50	12	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
1,3-Dichlorobenzene	ND		50	4.8	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
1,4-Dichlorobenzene	ND		50	8.3	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
1-Methylnaphthalene	ND		30	5.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
2,4,5-Trichlorophenol	ND		200	45	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
2,4-Dichlorophenol	ND		100	15	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
2,4-Dimethylphenol	ND		100	15	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
2-Chloronaphthalene	ND		25	5.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
2-Chlorophenol	ND		200	13	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
2-Methylnaphthalene	ND		50	8.8	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
2-Methylphenol	ND		150	9.8	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
2-Nitroaniline	ND		100	15	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
2-Nitrophenol	ND		200	21	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
3 & 4 Methylphenol	ND		200	15	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
3-Nitroaniline	ND		200	40	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
4,6-Dinitro-2-methylphenol	ND		1000	100	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
4-Bromophenyl phenyl ether	ND		200	9.1	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
4-Chloro-3-methylphenol	ND		150	33	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
4-Chlorophenyl phenyl ether	ND		200	6.3	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
4-Nitroaniline	ND		150	50	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
4-Nitrophenol	ND		1500	370	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Acenaphthene	ND		25	5.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Acenaphthylene	ND		25	5.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Anthracene	ND		25	5.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Benzo[a]anthracene	ND		25	5.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Benzo[a]pyrene	ND		60	13	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Benzo[b]fluoranthene	ND		25	5.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Benzo[g,h,i]perylene	ND		60	9.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Benzo[k]fluoranthene	ND		60	14	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Benzoic acid	ND		2000	580	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Benzyl alcohol	ND		500	77	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Bis(2-chloroethoxy)methane	ND		200	18	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Bis(2-ethylhexyl) phthalate	ND		600	71	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
bis(chloroisopropyl) ether	ND		200	14	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Butyl benzyl phthalate	ND		200	51	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Carbazole	ND		150	8.2	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Chrysene	ND		60	13	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Dibenz(a,h)anthracene	ND		50	12	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Dibenzofuran	ND		150	5.9	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Diethyl phthalate	ND		1500	76	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Dimethyl phthalate	ND		150	13	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Di-n-butyl phthalate	ND		500	57	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Di-n-octyl phthalate	ND		150	57	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Fluoranthene	ND		25	5.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Fluorene	ND		25	5.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Indeno[1,2,3-cd]pyrene	ND		40	5.0	ug/Kg	09/04/19 09:12	09/06/19 16:43		1
Isophorone	ND		150	7.4	ug/Kg	09/04/19 09:12	09/06/19 16:43		1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-310147/1-A

Matrix: Solid

Analysis Batch: 310468

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310147

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		25	5.0	ug/Kg		09/04/19 09:12	09/06/19 16:43	1
N-Nitrosodiphenylamine	ND		60	8.0	ug/Kg		09/04/19 09:12	09/06/19 16:43	1
Phenanthrene	ND		60	12	ug/Kg		09/04/19 09:12	09/06/19 16:43	1
Phenol	ND		150	23	ug/Kg		09/04/19 09:12	09/06/19 16:43	1
Pyrene	ND		60	6.4	ug/Kg		09/04/19 09:12	09/06/19 16:43	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	67		52 - 125	09/04/19 09:12	09/06/19 16:43	1
2-Fluorobiphenyl	93		57 - 120	09/04/19 09:12	09/06/19 16:43	1
2-Fluorophenol (Surr)	92		60 - 125	09/04/19 09:12	09/06/19 16:43	1
Nitrobenzene-d5 (Surr)	104		62 - 120	09/04/19 09:12	09/06/19 16:43	1
Phenol-d5 (Surr)	91		59 - 120	09/04/19 09:12	09/06/19 16:43	1
Terphenyl-d14 (Surr)	100		58 - 120	09/04/19 09:12	09/06/19 16:43	1

Lab Sample ID: LCS 580-310147/2-A

Matrix: Solid

Analysis Batch: 310468

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310147

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
1,2,4-Trichlorobenzene	1000	959		ug/Kg		96	66 - 120	
1,2-Dichlorobenzene	1000	917		ug/Kg		92	62 - 120	
1,3-Dichlorobenzene	1000	879		ug/Kg		88	64 - 120	
1,4-Dichlorobenzene	1000	876		ug/Kg		88	57 - 120	
1-Methylnaphthalene	1000	949		ug/Kg		95	69 - 120	
2,4,5-Trichlorophenol	1000	895		ug/Kg		90	64 - 120	
2,4-Dichlorophenol	1000	1010		ug/Kg		101	63 - 121	
2,4-Dimethylphenol	1000	983		ug/Kg		98	37 - 129	
2-Chloronaphthalene	1000	862		ug/Kg		86	65 - 120	
2-Chlorophenol	1000	969		ug/Kg		97	66 - 120	
2-Methylnaphthalene	1000	935		ug/Kg		94	65 - 120	
2-Methylphenol	1000	914		ug/Kg		91	61 - 120	
2-Nitroaniline	1000	899		ug/Kg		90	63 - 126	
2-Nitrophenol	1000	1150		ug/Kg		115	58 - 130	
3 & 4 Methylphenol	1000	878		ug/Kg		88	60 - 120	
3-Nitroaniline	1000	806		ug/Kg		81	34 - 120	
4,6-Dinitro-2-methylphenol	2000	2060		ug/Kg		103	13 - 150	
4-Bromophenyl phenyl ether	1000	841		ug/Kg		84	65 - 120	
4-Chloro-3-methylphenol	1000	893		ug/Kg		89	61 - 120	
4-Chlorophenyl phenyl ether	1000	925		ug/Kg		92	64 - 120	
4-Nitroaniline	1000	1030		ug/Kg		103	49 - 128	
4-Nitrophenol	2000	1650		ug/Kg		83	27 - 150	
Acenaphthene	1000	844		ug/Kg		84	64 - 120	
Acenaphthylene	1000	933		ug/Kg		93	63 - 120	
Anthracene	1000	937		ug/Kg		94	67 - 120	
Benzo[a]anthracene	1000	1110		ug/Kg		111	66 - 120	
Benzo[a]pyrene	1000	970		ug/Kg		97	72 - 121	
Benzo[b]fluoranthene	1000	1000		ug/Kg		100	71 - 130	
Benzo[g,h,i]perylene	1000	987		ug/Kg		99	59 - 134	

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-310147/2-A

Matrix: Solid

Analysis Batch: 310468

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310147

%Rec.

Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Benzo[k]fluoranthene	1000	944		ug/Kg		94	68 - 123
Benzoic acid	2000	1240	J	ug/Kg		62	10 - 120
Benzyl alcohol	1000	347	J	ug/Kg		35	28 - 134
Bis(2-chloroethoxy)methane	1000	927		ug/Kg		93	60 - 120
Bis(2-ethylhexyl) phthalate	1000	1180		ug/Kg		118	59 - 136
bis(chloroisopropyl) ether	1000	1120		ug/Kg		112	42 - 134
Butyl benzyl phthalate	1000	1220		ug/Kg		122	59 - 141
Carbazole	1000	1400	*	ug/Kg		140	70 - 137
Chrysene	1000	975		ug/Kg		97	63 - 120
Dibenz(a,h)anthracene	1000	950		ug/Kg		95	59 - 132
Dibenzofuran	1000	923		ug/Kg		92	68 - 120
Diethyl phthalate	1000	993	J	ug/Kg		99	53 - 126
Dimethyl phthalate	1000	940		ug/Kg		94	66 - 120
Di-n-butyl phthalate	1000	960		ug/Kg		96	59 - 129
Di-n-octyl phthalate	1000	1230		ug/Kg		123	53 - 144
Fluoranthene	1000	980		ug/Kg		98	69 - 120
Fluorene	1000	871		ug/Kg		87	68 - 121
Indeno[1,2,3-cd]pyrene	1000	947		ug/Kg		95	52 - 139
Isophorone	1000	997		ug/Kg		100	61 - 128
Naphthalene	1000	870		ug/Kg		87	68 - 120
N-Nitrosodiphenylamine	1000	926		ug/Kg		93	67 - 120
Phenanthrene	1000	898		ug/Kg		90	68 - 120
Phenol	1000	902		ug/Kg		90	59 - 120
Pyrene	1000	1010		ug/Kg		101	73 - 120

LCS

LCS

Surrogate	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol (Surrogate)	93		52 - 125
2-Fluorobiphenyl	91		57 - 120
2-Fluorophenol (Surrogate)	98		60 - 125
Nitrobenzene-d5 (Surrogate)	111		62 - 120
Phenol-d5 (Surrogate)	98		59 - 120
Terphenyl-d14 (Surrogate)	96		58 - 120

Lab Sample ID: 580-88695-1 MS

Matrix: Solid

Analysis Batch: 310468

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	ND		1150	944		ug/Kg	⊗	82	66 - 120
1,2-Dichlorobenzene	ND		1150	862		ug/Kg	⊗	75	62 - 120
1,3-Dichlorobenzene	ND		1150	797		ug/Kg	⊗	69	64 - 120
1,4-Dichlorobenzene	ND		1150	807		ug/Kg	⊗	70	57 - 120
1-Methylnaphthalene	ND		1150	1000		ug/Kg	⊗	87	69 - 120
2,4,5-Trichlorophenol	ND		1150	1290		ug/Kg	⊗	112	64 - 120
2,4-Dichlorophenol	ND		1150	1160		ug/Kg	⊗	100	63 - 121
2,4-Dimethylphenol	ND		1150	1070		ug/Kg	⊗	93	37 - 129
2-Chloronaphthalene	ND		1150	983		ug/Kg	⊗	85	65 - 120
2-Chlorophenol	ND		1150	1010		ug/Kg	⊗	87	66 - 120

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-88695-1 MS

Matrix: Solid

Analysis Batch: 310468

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limts
2-Methylnaphthalene	ND		1150	976		ug/Kg	⊗	85	65 - 120
2-Methylphenol	ND		1150	1030		ug/Kg	⊗	90	61 - 120
2-Nitroaniline	ND		1150	1130		ug/Kg	⊗	98	63 - 126
2-Nitrophenol	ND		1150	1250		ug/Kg	⊗	108	58 - 130
3 & 4 Methylphenol	ND		1150	921		ug/Kg	⊗	80	60 - 120
3-Nitroaniline	ND		1150	718		ug/Kg	⊗	62	34 - 120
4,6-Dinitro-2-methylphenol	ND		2300	1600		ug/Kg	⊗	70	13 - 150
4-Bromophenyl phenyl ether	ND		1150	911		ug/Kg	⊗	79	65 - 120
4-Chloro-3-methylphenol	ND		1150	1070		ug/Kg	⊗	93	61 - 120
4-Chlorophenyl phenyl ether	ND		1150	1080		ug/Kg	⊗	94	64 - 120
4-Nitroaniline	ND F2		1150	654		ug/Kg	⊗	57	49 - 128
4-Nitrophenol	ND		2300	2590		ug/Kg	⊗	113	27 - 150
Acenaphthene	ND		1150	981		ug/Kg	⊗	85	64 - 120
Acenaphthylene	ND		1150	1070		ug/Kg	⊗	93	63 - 120
Anthracene	ND		1150	1010		ug/Kg	⊗	88	67 - 120
Benzo[a]anthracene	ND		1150	1230		ug/Kg	⊗	107	66 - 120
Benzo[a]pyrene	ND		1150	999		ug/Kg	⊗	87	72 - 121
Benzo[b]fluoranthene	ND		1150	1030		ug/Kg	⊗	90	71 - 130
Benzo[g,h,i]perylene	ND		1150	1040		ug/Kg	⊗	90	59 - 134
Benzo[k]fluoranthene	ND		1150	890		ug/Kg	⊗	77	68 - 123
Benzoic acid	ND F1		2300	3050	F1	ug/Kg	⊗	133	10 - 120
Benzyl alcohol	ND		1150	322 J		ug/Kg	⊗	28	28 - 134
Bis(2-chloroethoxy)methane	ND		1150	969		ug/Kg	⊗	84	60 - 120
Bis(2-ethylhexyl) phthalate	ND		1150	1550		ug/Kg	⊗	135	59 - 136
bis(chloroisopropyl) ether	ND		1150	1130		ug/Kg	⊗	98	42 - 134
Butyl benzyl phthalate	60 J		1150	1510		ug/Kg	⊗	126	59 - 141
Carbazole	ND F1 *		1150	1670	F1	ug/Kg	⊗	145	70 - 137
Chrysene	ND		1150	1110		ug/Kg	⊗	96	63 - 120
Dibenz(a,h)anthracene	ND		1150	1020		ug/Kg	⊗	89	59 - 132
Dibenzofuran	ND		1150	1070		ug/Kg	⊗	93	68 - 120
Diethyl phthalate	ND		1150	1210 J		ug/Kg	⊗	106	53 - 126
Dimethyl phthalate	ND		1150	1170		ug/Kg	⊗	101	66 - 120
Di-n-butyl phthalate	ND		1150	1180		ug/Kg	⊗	102	59 - 129
Di-n-octyl phthalate	ND		1150	1460		ug/Kg	⊗	127	53 - 144
Fluoranthene	7.5 J		1150	1130		ug/Kg	⊗	97	69 - 120
Fluorene	ND		1150	1030		ug/Kg	⊗	89	68 - 121
Indeno[1,2,3-cd]pyrene	ND		1150	1110		ug/Kg	⊗	96	52 - 139
Isophorone	ND		1150	1030		ug/Kg	⊗	90	61 - 128
Naphthalene	ND		1150	862		ug/Kg	⊗	75	68 - 120
N-Nitrosodiphenylamine	ND		1150	1040		ug/Kg	⊗	90	67 - 120
Phenanthrene	ND		1150	1010		ug/Kg	⊗	87	68 - 120
Phenol	ND		1150	927		ug/Kg	⊗	81	59 - 120
Pyrene	ND		1150	1150		ug/Kg	⊗	100	73 - 120

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	96		52 - 125
2-Fluorobiphenyl	91		57 - 120
2-Fluorophenol (Surr)	91		60 - 125

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-88695-1 MS

Matrix: Solid

Analysis Batch: 310468

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310147

Surrogate	MS	MS	%Recovery	Qualifier	Limits
Nitrobenzene-d5 (Surr)	97				62 - 120
Phenol-d5 (Surr)	90				59 - 120
Terphenyl-d14 (Surr)	92				58 - 120

Lab Sample ID: 580-88695-1 MSD

Matrix: Solid

Analysis Batch: 310468

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310147

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		1040	1040		ug/Kg	⊗	100	66 - 120	9	18	
1,2-Dichlorobenzene	ND		1040	967		ug/Kg	⊗	93	62 - 120	12	30	
1,3-Dichlorobenzene	ND		1040	936		ug/Kg	⊗	90	64 - 120	16	29	
1,4-Dichlorobenzene	ND		1040	930		ug/Kg	⊗	90	57 - 120	14	35	
1-Methylnaphthalene	ND		1040	1030		ug/Kg	⊗	99	69 - 120	3	24	
2,4,5-Trichlorophenol	ND		1040	1160		ug/Kg	⊗	112	64 - 120	10	23	
2,4-Dichlorophenol	ND		1040	1130		ug/Kg	⊗	109	63 - 121	2	19	
2,4-Dimethylphenol	ND		1040	1000		ug/Kg	⊗	96	37 - 129	7	40	
2-Chloronaphthalene	ND		1040	946		ug/Kg	⊗	91	65 - 120	4	21	
2-Chlorophenol	ND		1040	1050		ug/Kg	⊗	101	66 - 120	4	32	
2-Methylnaphthalene	ND		1040	988		ug/Kg	⊗	95	65 - 120	1	21	
2-Methylphenol	ND		1040	964		ug/Kg	⊗	93	61 - 120	7	40	
2-Nitroaniline	ND		1040	998		ug/Kg	⊗	96	63 - 126	13	16	
2-Nitrophenol	ND		1040	1270		ug/Kg	⊗	123	58 - 130	2	30	
3 & 4 Methylphenol	ND		1040	920		ug/Kg	⊗	88	60 - 120	0	36	
3-Nitroaniline	ND		1040	617		ug/Kg	⊗	59	34 - 120	15	25	
4,6-Dinitro-2-methylphenol	ND		2080	1630		ug/Kg	⊗	78	13 - 150	2	40	
4-Bromophenyl phenyl ether	ND		1040	855		ug/Kg	⊗	82	65 - 120	6	32	
4-Chloro-3-methylphenol	ND		1040	1000		ug/Kg	⊗	97	61 - 120	6	25	
4-Chlorophenyl phenyl ether	ND		1040	980		ug/Kg	⊗	94	64 - 120	10	21	
4-Nitroaniline	ND	F2	1040	850	F2	ug/Kg	⊗	82	49 - 128	26	23	
4-Nitrophenol	ND		2080	2080		ug/Kg	⊗	100	27 - 150	22	31	
Acenaphthene	ND		1040	900		ug/Kg	⊗	87	64 - 120	9	19	
Acenaphthylene	ND		1040	1020		ug/Kg	⊗	98	63 - 120	4	18	
Anthracene	ND		1040	966		ug/Kg	⊗	93	67 - 120	4	28	
Benzo[a]anthracene	ND		1040	1160		ug/Kg	⊗	111	66 - 120	6	21	
Benzo[a]pyrene	ND		1040	980		ug/Kg	⊗	94	72 - 121	2	27	
Benzo[b]fluoranthene	ND		1040	949		ug/Kg	⊗	91	71 - 130	9	25	
Benzo[g,h,i]perylene	ND		1040	987		ug/Kg	⊗	95	59 - 134	5	26	
Benzo[k]fluoranthene	ND		1040	875		ug/Kg	⊗	84	68 - 123	2	18	
Benzoic acid	ND	F1	2080	3050	F1	ug/Kg	⊗	147	10 - 120	0	40	
Benzyl alcohol	ND		1040	470	J	ug/Kg	⊗	45	28 - 134	37	40	
Bis(2-chloroethoxy)methane	ND		1040	972		ug/Kg	⊗	93	60 - 120	0	33	
Bis(2-ethylhexyl) phthalate	ND		1040	1410		ug/Kg	⊗	136	59 - 136	9	25	
bis(chloroisopropyl) ether	ND		1040	1220		ug/Kg	⊗	118	42 - 134	8	33	
Butyl benzyl phthalate	60	J	1040	1400		ug/Kg	⊗	129	59 - 141	7	27	
Carbazole	ND	F1 *	1040	1570	F1	ug/Kg	⊗	151	70 - 137	7	24	
Chrysene	ND		1040	1030		ug/Kg	⊗	99	63 - 120	7	27	
Dibenz(a,h)anthracene	ND		1040	946		ug/Kg	⊗	91	59 - 132	8	29	

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-88695-1 MSD

Matrix: Solid

Analysis Batch: 310468

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310147

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
Dibenzofuran	ND		1040	1020	J	ug/Kg	⊗	98	68 - 120	5	18
Diethyl phthalate	ND		1040	1100	J	ug/Kg	⊗	106	53 - 126	10	22
Dimethyl phthalate	ND		1040	1050		ug/Kg	⊗	101	66 - 120	11	21
Di-n-butyl phthalate	ND		1040	1070		ug/Kg	⊗	103	59 - 129	10	26
Di-n-octyl phthalate	ND		1040	1390		ug/Kg	⊗	134	53 - 144	5	18
Fluoranthene	7.5	J	1040	1010		ug/Kg	⊗	96	69 - 120	11	21
Fluorene	ND		1040	925		ug/Kg	⊗	89	68 - 121	11	17
Indeno[1,2,3-cd]pyrene	ND		1040	1010		ug/Kg	⊗	97	52 - 139	9	30
Isophorone	ND		1040	1090		ug/Kg	⊗	105	61 - 128	5	31
Naphthalene	ND		1040	906		ug/Kg	⊗	87	68 - 120	5	15
N-Nitrosodiphenylamine	ND		1040	967		ug/Kg	⊗	93	67 - 120	7	30
Phenanthrene	ND		1040	917		ug/Kg	⊗	88	68 - 120	9	27
Phenol	ND		1040	907		ug/Kg	⊗	87	59 - 120	2	30
Pyrene	ND		1040	1070		ug/Kg	⊗	103	73 - 120	7	24

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol (Surr)	95		52 - 125
2-Fluorobiphenyl	94		57 - 120
2-Fluorophenol (Surr)	103		60 - 125
Nitrobenzene-d5 (Surr)	113		62 - 120
Phenol-d5 (Surr)	102		59 - 120
Terphenyl-d14 (Surr)	93		58 - 120

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: MB 580-309543/1-A

Matrix: Water

Analysis Batch: 310259

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309543

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10	0.025	ug/L	08/28/19 09:48	09/05/19 10:51		1
2-Methylnaphthalene	ND		0.030	0.0060	ug/L	08/28/19 09:48	09/05/19 10:51		1
1-Methylnaphthalene	ND		0.030	0.0070	ug/L	08/28/19 09:48	09/05/19 10:51		1
Acenaphthylene	ND		0.030	0.0060	ug/L	08/28/19 09:48	09/05/19 10:51		1
Acenaphthene	ND		0.030	0.0060	ug/L	08/28/19 09:48	09/05/19 10:51		1
Fluorene	ND		0.060	0.0060	ug/L	08/28/19 09:48	09/05/19 10:51		1
Phenanthrene	ND		0.060	0.017	ug/L	08/28/19 09:48	09/05/19 10:51		1
Anthracene	ND		0.060	0.0060	ug/L	08/28/19 09:48	09/05/19 10:51		1
Fluoranthene	ND		0.060	0.015	ug/L	08/28/19 09:48	09/05/19 10:51		1
Pyrene	ND		0.030	0.0060	ug/L	08/28/19 09:48	09/05/19 10:51		1
Benzo[a]anthracene	0.00952	J	0.060	0.0060	ug/L	08/28/19 09:48	09/05/19 10:51		1
Chrysene	ND		0.060	0.015	ug/L	08/28/19 09:48	09/05/19 10:51		1
Benzo[b]fluoranthene	ND		0.060	0.013	ug/L	08/28/19 09:48	09/05/19 10:51		1
Benzo[k]fluoranthene	ND		0.060	0.0060	ug/L	08/28/19 09:48	09/05/19 10:51		1
Benzo[a]pyrene	ND		0.060	0.0060	ug/L	08/28/19 09:48	09/05/19 10:51		1
Indeno[1,2,3-cd]pyrene	ND		0.030	0.0060	ug/L	08/28/19 09:48	09/05/19 10:51		1
Dibenz(a,h)anthracene	ND		0.060	0.013	ug/L	08/28/19 09:48	09/05/19 10:51		1
Benzo[g,h,i]perylene	ND		0.060	0.0060	ug/L	08/28/19 09:48	09/05/19 10:51		1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: MB 580-309543/1-A

Matrix: Water

Analysis Batch: 310259

Surrogate	<i>MB</i>		<i>MB</i>
	%Recovery	Qualifier	
Terphenyl-d14	87		54 - 120

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309543

Lab Sample ID: LCS 580-309543/2-A

Matrix: Water

Analysis Batch: 310259

Analyte	Spike Added	<i>LCS</i>		Unit	D	%Rec	Limits	%Rec.
		Result	Qualifier					
Naphthalene	4.00	3.93		ug/L	98	37 - 120		
2-Methylnaphthalene	4.00	4.46		ug/L	111	32 - 120		
1-Methylnaphthalene	4.00	4.15		ug/L	104	30 - 120		
Acenaphthylene	4.00	1.98		ug/L	50	27 - 123		
Acenaphthene	4.00	3.52		ug/L	88	36 - 120		
Fluorene	4.00	4.08		ug/L	102	43 - 120		
Phenanthrene	4.00	4.16		ug/L	104	49 - 120		
Anthracene	4.00	2.90		ug/L	73	38 - 120		
Fluoranthene	4.00	4.12		ug/L	103	48 - 133		
Pyrene	4.00	3.61		ug/L	90	45 - 133		
Benzo[a]anthracene	4.00	4.06		ug/L	102	53 - 130		
Chrysene	4.00	4.07		ug/L	102	52 - 125		
Benzo[b]fluoranthene	4.00	4.56		ug/L	114	57 - 132		
Benzo[k]fluoranthene	4.00	3.69		ug/L	92	52 - 132		
Benzo[a]pyrene	4.00	0.592 *		ug/L	15	33 - 129		
Indeno[1,2,3-cd]pyrene	4.00	3.88		ug/L	97	58 - 133		
Dibenz(a,h)anthracene	4.00	4.20		ug/L	105	57 - 140		
Benzo[g,h,i]perylene	4.00	2.88		ug/L	72	52 - 134		

Surrogate	<i>LCS</i>		<i>LCS</i>
	%Recovery	Qualifier	Limits
Terphenyl-d14	97		54 - 120

Lab Sample ID: LCSD 580-309543/3-A

Matrix: Water

Analysis Batch: 310259

Analyte	Spike Added	<i>LCSD</i>		Unit	D	%Rec	Limits	%Rec.	RPD
		Result	Qualifier						
Naphthalene	4.00	3.12		ug/L	78	37 - 120			23
2-Methylnaphthalene	4.00	3.46		ug/L	86	32 - 120			25
1-Methylnaphthalene	4.00	3.28		ug/L	82	30 - 120			23
Acenaphthylene	4.00	2.98 *		ug/L	75	27 - 123			40
Acenaphthene	4.00	3.31		ug/L	83	36 - 120			6
Fluorene	4.00	3.67		ug/L	92	43 - 120			11
Phenanthrene	4.00	4.20		ug/L	105	49 - 120			1
Anthracene	4.00	2.95		ug/L	74	38 - 120			2
Fluoranthene	4.00	4.48		ug/L	112	48 - 133			8
Pyrene	4.00	4.29		ug/L	107	45 - 133			17
Benzo[a]anthracene	4.00	4.06		ug/L	101	53 - 130			0
Chrysene	4.00	4.05		ug/L	101	52 - 125			0
Benzo[b]fluoranthene	4.00	4.58		ug/L	115	57 - 132			0
Benzo[k]fluoranthene	4.00	3.85		ug/L	96	52 - 132			4

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 309543

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 580-309543/3-A

Matrix: Water

Analysis Batch: 310259

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 309543

%Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Benzo[a]pyrene	4.00	2.77	*	ug/L		69	33 - 129	130	35
Indeno[1,2,3-cd]pyrene	4.00	4.36		ug/L		109	58 - 133	12	31
Dibenz(a,h)anthracene	4.00	4.33		ug/L		108	57 - 140	3	31
Benzo[g,h,i]perylene	4.00	4.04		ug/L		101	52 - 134	33	35

Surrogate	LCSD	LCSD							
	%Recovery	Qualifier	Limits						
Terphenyl-d14	99		54 - 120						

Lab Sample ID: MB 580-310035/1-A

Matrix: Solid

Analysis Batch: 310163

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310035

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		10	4.1	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
2,4-Dinitrophenol	ND		150	30	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
2,4-Dinitrotoluene	ND		20	4.0	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
2,6-Dinitrotoluene	ND		10	3.1	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
3,3'-Dichlorobenzidine	ND		10	4.4	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
4-Chloroaniline	ND		150	48	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
Bis(2-chloroethyl)ether	ND		10	3.1	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
Hexachlorobenzene	ND		10	3.7	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
Hexachlorobutadiene	ND		10	2.0	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
Hexachlorocyclopentadiene	ND		10	3.5	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
Hexachloroethane	ND		10	3.0	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
Nitrobenzene	ND		10	3.1	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
N-Nitrosodimethylamine	ND		20	4.6	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
N-Nitrosodi-n-propylamine	ND		10	3.7	ug/Kg		09/03/19 09:39	09/04/19 11:59	1
Pentachlorophenol	ND		300	91	ug/Kg		09/03/19 09:39	09/04/19 11:59	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	48		28 - 143			1
2-Fluorobiphenyl	74		42 - 140			1
Nitrobenzene-d5	70		38 - 141			1
Terphenyl-d14	85		68 - 138			1

Lab Sample ID: LCS 580-310035/2-A

Matrix: Solid

Analysis Batch: 310163

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310035

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
2,4,6-Trichlorophenol	1000	762		ug/Kg		76	39 - 126		
2,4-Dinitrophenol	2000	1630		ug/Kg		81	20 - 141		
2,4-Dinitrotoluene	1000	967		ug/Kg		97	48 - 126		
2,6-Dinitrotoluene	1000	899		ug/Kg		90	46 - 124		
3,3'-Dichlorobenzidine	2000	1430		ug/Kg		71	22 - 121		
4-Chloroaniline	1000	223		ug/Kg		22	17 - 120		
Bis(2-chloroethyl)ether	1000	820		ug/Kg		82	18 - 120		
Hexachlorobenzene	1000	760		ug/Kg		76	39 - 125		

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 580-310035/2-A

Matrix: Solid

Analysis Batch: 310163

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310035

%Rec.

Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Hexachlorobutadiene	1000	704		ug/Kg		70	32 - 123
Hexachlorocyclopentadiene	1000	819		ug/Kg		82	46 - 131
Hexachloroethane	1000	791		ug/Kg		79	28 - 120
Nitrobenzene	1000	869		ug/Kg		87	34 - 122
N-Nitrosodimethylamine	1000	838		ug/Kg		84	58 - 124
N-Nitrosodi-n-propylamine	1000	808		ug/Kg		81	36 - 120
Pentachlorophenol	2000	1420		ug/Kg		71	36 - 129

LCS LCS

%Recovery Qualifier Limits

Surrogate	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol	78		28 - 143
2-Fluorobiphenyl	88		42 - 140
Nitrobenzene-d5	86		38 - 141
Terphenyl-d14	91		68 - 138

Lab Sample ID: 580-88695-11 MS

Matrix: Solid

Analysis Batch: 310163

Client Sample ID: TS-01-SO

Prep Type: Total/NA

Prep Batch: 310035

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
2,4,6-Trichlorophenol	ND		1160	1030		ug/Kg	⊗	89	39 - 126
2,4-Dinitrophenol	ND	F2	2320	1690		ug/Kg	⊗	73	20 - 141
2,4-Dinitrotoluene	ND		1160	1200		ug/Kg	⊗	104	48 - 126
2,6-Dinitrotoluene	ND		1160	1100		ug/Kg	⊗	95	46 - 124
3,3'-Dichlorobenzidine	ND	F1	2320	476	F1	ug/Kg	⊗	21	22 - 121
4-Chloroaniline	ND	F1	1160	187	F1	ug/Kg	⊗	16	17 - 120
Bis(2-chloroethyl)ether	ND		1160	1080		ug/Kg	⊗	94	18 - 120
Hexachlorobenzene	ND		1160	920		ug/Kg	⊗	79	39 - 125
Hexachlorobutadiene	ND		1160	903		ug/Kg	⊗	78	32 - 123
Hexachlorocyclopentadiene	ND		1160	947		ug/Kg	⊗	82	46 - 131
Hexachloroethane	ND		1160	1050		ug/Kg	⊗	91	28 - 120
Nitrobenzene	ND		1160	1120		ug/Kg	⊗	97	34 - 122
N-Nitrosodimethylamine	ND		1160	1090		ug/Kg	⊗	94	58 - 124
N-Nitrosodi-n-propylamine	ND		1160	1120		ug/Kg	⊗	97	36 - 120
Pentachlorophenol	ND		2320	1950		ug/Kg	⊗	84	36 - 129

MS MS

%Recovery Qualifier Limits

Surrogate	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol	80		28 - 143
2-Fluorobiphenyl	98		42 - 140
Nitrobenzene-d5	92		38 - 141
Terphenyl-d14	90		68 - 138

Lab Sample ID: 580-88695-11 MSD

Matrix: Solid

Analysis Batch: 310163

Client Sample ID: TS-01-SO

Prep Type: Total/NA

Prep Batch: 310035

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
2,4,6-Trichlorophenol	ND		1120	1030		ug/Kg	⊗	92	39 - 126	0	30
2,4-Dinitrophenol	ND	F2	2230	1200	F2	ug/Kg	⊗	54	20 - 141	34	30

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: 580-88695-11 MSD

Matrix: Solid

Analysis Batch: 310163

Client Sample ID: TS-01-SO

Prep Type: Total/NA

Prep Batch: 310035

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
2,4-Dinitrotoluene	ND		1120	1190	E	ug/Kg	⊗	107	48 - 126	1	30
2,6-Dinitrotoluene	ND		1120	1140		ug/Kg	⊗	102	46 - 124	4	30
3,3'-Dichlorobenzidine	ND	F1	2230	641		ug/Kg	⊗	29	22 - 121	30	30
4-Chloroaniline	ND	F1	1120	198		ug/Kg	⊗	18	17 - 120	5	30
Bis(2-chloroethyl)ether	ND		1120	1000		ug/Kg	⊗	90	18 - 120	8	30
Hexachlorobenzene	ND		1120	908		ug/Kg	⊗	81	39 - 125	1	30
Hexachlorobutadiene	ND		1120	890		ug/Kg	⊗	80	32 - 123	1	30
Hexachlorocyclopentadiene	ND		1120	863		ug/Kg	⊗	77	46 - 131	9	30
Hexachloroethane	ND		1120	968		ug/Kg	⊗	87	28 - 120	8	30
Nitrobenzene	ND		1120	1060		ug/Kg	⊗	95	34 - 122	6	30
N-Nitrosodimethylamine	ND		1120	1020		ug/Kg	⊗	92	58 - 124	6	30
N-Nitrosodi-n-propylamine	ND		1120	1070		ug/Kg	⊗	96	36 - 120	5	30
Pentachlorophenol	ND		2230	1950		ug/Kg	⊗	87	36 - 129	0	30

MSD MSD

Surrogate	%Recovery	Qualifier	Limits
2,4,6-Tribromophenol	83		28 - 143
2-Fluorobiphenyl	102		42 - 140
Nitrobenzene-d5	97		38 - 141
Terphenyl-d14	96		68 - 138

Lab Sample ID: MB 580-310147/1-A

Matrix: Solid

Analysis Batch: 310163

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310147

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,6-Trichlorophenol	ND		10	4.1	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
2,4-Dinitrophenol	ND		150	30	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
2,4-Dinitrotoluene	ND		20	4.0	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
2,6-Dinitrotoluene	ND		10	3.1	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
3,3'-Dichlorobenzidine	ND		10	4.4	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
4-Chloroaniline	ND		150	48	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
Bis(2-chloroethyl)ether	ND		10	3.1	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
Hexachlorobenzene	ND		10	3.7	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
Hexachlorobutadiene	ND		10	2.0	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
Hexachlorocyclopentadiene	ND		10	3.5	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
Hexachloroethane	ND		10	3.0	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
Nitrobenzene	ND		10	3.1	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
N-Nitrosodimethylamine	ND		20	4.6	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
N-Nitrosodi-n-propylamine	ND		10	3.7	ug/Kg		09/04/19 09:12	09/04/19 16:13	1
Pentachlorophenol	ND		300	91	ug/Kg		09/04/19 09:12	09/04/19 16:13	1

MB MB

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol	67		28 - 143	09/04/19 09:12	09/04/19 16:13	1
2-Fluorobiphenyl	87		42 - 140	09/04/19 09:12	09/04/19 16:13	1
Nitrobenzene-d5	78		38 - 141	09/04/19 09:12	09/04/19 16:13	1
Terphenyl-d14	108		68 - 138	09/04/19 09:12	09/04/19 16:13	1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCS 580-310147/2-A

Matrix: Solid

Analysis Batch: 310297

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310147

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,4,6-Trichlorophenol	1000	852		ug/Kg		85	39 - 126
2,4-Dinitrophenol	2000	1600		ug/Kg		80	20 - 141
2,4-Dinitrotoluene	1000	1080		ug/Kg		108	48 - 126
2,6-Dinitrotoluene	1000	952		ug/Kg		95	46 - 124
3,3'-Dichlorobenzidine	2000	1610		ug/Kg		81	22 - 121
4-Chloroaniline	1000	237		ug/Kg		24	17 - 120
Bis(2-chloroethyl)ether	1000	958		ug/Kg		96	18 - 120
Hexachlorobenzene	1000	805		ug/Kg		81	39 - 125
Hexachlorobutadiene	1000	802		ug/Kg		80	32 - 123
Hexachlorocyclopentadiene	1000	921		ug/Kg		92	46 - 131
Hexachloroethane	1000	920		ug/Kg		92	28 - 120
Nitrobenzene	1000	988		ug/Kg		99	34 - 122
N-Nitrosodimethylamine	1000	1040		ug/Kg		104	58 - 124
N-Nitrosodi-n-propylamine	1000	1030		ug/Kg		103	36 - 120
Pentachlorophenol	2000	1360		ug/Kg		68	36 - 129

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol	72		28 - 143
2-Fluorobiphenyl	99		42 - 140
Nitrobenzene-d5	89		38 - 141
Terphenyl-d14	88		68 - 138

Lab Sample ID: 580-88695-1 MS

Matrix: Solid

Analysis Batch: 310163

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310147

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
2,4,6-Trichlorophenol	ND		1150	1000		ug/Kg	⊗	87	39 - 126
2,4-Dinitrophenol	ND	F1	2300	246	F1	ug/Kg	⊗	11	20 - 141
2,4-Dinitrotoluene	ND		1150	1140		ug/Kg	⊗	99	48 - 126
2,6-Dinitrotoluene	ND		1150	1050		ug/Kg	⊗	91	46 - 124
3,3'-Dichlorobenzidine	ND	F2 F1	2300	24.2	F1	ug/Kg	⊗	1	22 - 121
4-Chloroaniline	ND	F2	1150	242		ug/Kg	⊗	21	17 - 120
Bis(2-chloroethyl)ether	ND		1150	902		ug/Kg	⊗	78	18 - 120
Hexachlorobenzene	ND		1150	877		ug/Kg	⊗	76	39 - 125
Hexachlorobutadiene	ND		1150	760		ug/Kg	⊗	66	32 - 123
Hexachlorocyclopentadiene	ND	F1	1150	137	F1	ug/Kg	⊗	12	46 - 131
Hexachloroethane	ND		1150	709		ug/Kg	⊗	62	28 - 120
Nitrobenzene	ND		1150	977		ug/Kg	⊗	85	34 - 122
N-Nitrosodimethylamine	ND		1150	837		ug/Kg	⊗	73	58 - 124
N-Nitrosodi-n-propylamine	ND		1150	979		ug/Kg	⊗	85	36 - 120
Pentachlorophenol	ND		2300	1940		ug/Kg	⊗	84	36 - 129

Surrogate	MS %Recovery	MS Qualifier	Limits
2,4,6-Tribromophenol	78		28 - 143
2-Fluorobiphenyl	88		42 - 140
Nitrobenzene-d5	83		38 - 141
Terphenyl-d14	91		68 - 138

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8270D SIM - Semivolatile Organic Compounds (GC/MS SIM)

Lab Sample ID: 580-88695-1 MSD

Matrix: Solid

Analysis Batch: 310163

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310147

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4,6-Trichlorophenol	ND		1040	941		ug/Kg	⊗	91	39 - 126	6	30
2,4-Dinitrophenol	ND	F1	2080	273	F1	ug/Kg	⊗	13	20 - 141	10	30
2,4-Dinitrotoluene	ND		1040	1010		ug/Kg	⊗	97	48 - 126	12	30
2,6-Dinitrotoluene	ND		1040	1020		ug/Kg	⊗	98	46 - 124	3	30
3,3'-Dichlorobenzidine	ND	F2 F1	2080	41.3	F2 F1	ug/Kg	⊗	2	22 - 121	52	30
4-Chloroaniline	ND	F2	1040	173	F2	ug/Kg	⊗	17	17 - 120	33	30
Bis(2-chloroethyl)ether	ND		1040	948		ug/Kg	⊗	91	18 - 120	5	30
Hexachlorobenzene	ND		1040	821		ug/Kg	⊗	79	39 - 125	7	30
Hexachlorobutadiene	ND		1040	859		ug/Kg	⊗	83	32 - 123	12	30
Hexachlorocyclopentadiene	ND	F1	1040	147	F1	ug/Kg	⊗	14	46 - 131	7	30
Hexachloroethane	ND		1040	827		ug/Kg	⊗	80	28 - 120	15	30
Nitrobenzene	ND		1040	1040		ug/Kg	⊗	100	34 - 122	6	30
N-Nitrosodimethylamine	ND		1040	1000		ug/Kg	⊗	96	58 - 124	18	30
N-Nitrosodi-n-propylamine	ND		1040	1020		ug/Kg	⊗	98	36 - 120	4	30
Pentachlorophenol	ND		2080	1840		ug/Kg	⊗	88	36 - 129	5	30

Surrogate	MSD		Limits
	%Recovery	Qualifier	
2,4,6-Tribromophenol	84		28 - 143
2-Fluorobiphenyl	94		42 - 140
Nitrobenzene-d5	99		38 - 141
Terphenyl-d14	93		68 - 138

Method: 8011 - EDB and DBCP in Water by Microextraction

Lab Sample ID: MB 580-310074/3-A

Matrix: Solid

Analysis Batch: 310465

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310074

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.30	0.066	ug/Kg		09/03/19 12:34	09/06/19 16:14	1
Ethylene Dibromide	ND		0.050	0.012	ug/Kg		09/03/19 12:34	09/06/19 16:14	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dibromopropane	93		60 - 140	09/03/19 12:34	09/06/19 16:14	1

Lab Sample ID: LCS 580-310074/4-A

Matrix: Solid

Analysis Batch: 310465

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310074

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,3-Trichloropropane	0.400	0.444		ug/Kg		111	60 - 140
Ethylene Dibromide	0.400	0.452		ug/Kg		113	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dibromopropane	85		60 - 140

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8011 - EDB and DBCP in Water by Microextraction (Continued)

Lab Sample ID: LCSD 580-310074/5-A

Matrix: Solid

Analysis Batch: 310465

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 310074

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3-Trichloropropane	0.400	0.453		ug/Kg		113	60 - 140	2	20
Ethylene Dibromide	0.400	0.461		ug/Kg		115	60 - 140	2	20
Surrogate									
LCSD %Recovery Qualifier Limits									
1,2-Dibromopropane	89			60 - 140					

Lab Sample ID: MB 580-310972/3-A

Matrix: Solid

Analysis Batch: 311024

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310972

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		0.30	0.066	ug/Kg				1
Ethylene Dibromide	ND		0.050	0.012	ug/Kg		09/12/19 10:55	09/12/19 16:45	1
Surrogate									
MB %Recovery Qualifier Limits									
1,2-Dibromopropane	92		60 - 140				09/12/19 10:55	09/12/19 16:45	1

Lab Sample ID: LCS 580-310972/4-A

Matrix: Solid

Analysis Batch: 311024

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310972

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	Dil Fac
1,2,3-Trichloropropane	0.400	0.446		ug/Kg		111	60 - 140	
Ethylene Dibromide	0.400	0.477		ug/Kg		119	60 - 140	
Surrogate								
LCS %Recovery Qualifier Limits								
1,2-Dibromopropane	94		60 - 140					

Lab Sample ID: LCSD 580-310972/5-A

Matrix: Solid

Analysis Batch: 311024

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 310972

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD
1,2,3-Trichloropropane	0.400	0.376		ug/Kg		94	60 - 140	17
Ethylene Dibromide	0.400	0.443		ug/Kg		111	60 - 140	7
Surrogate								
LCSD %Recovery Qualifier Limits								
1,2-Dibromopropane	106		60 - 140					

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 590-23989/1-A

Matrix: Solid

Analysis Batch: 24016

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23989

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		10	2.2	ug/Kg		09/06/19 08:42	09/09/19 14:19	1
PCB-1221	ND		10	2.2	ug/Kg		09/06/19 08:42	09/09/19 14:19	1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 590-23989/1-A

Matrix: Solid

Analysis Batch: 24016

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23989

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1232	ND		10	2.2	ug/Kg		09/06/19 08:42	09/09/19 14:19	1
PCB-1242	ND		10	2.2	ug/Kg		09/06/19 08:42	09/09/19 14:19	1
PCB-1248	ND		10	2.2	ug/Kg		09/06/19 08:42	09/09/19 14:19	1
PCB-1254	ND		10	2.2	ug/Kg		09/06/19 08:42	09/09/19 14:19	1
PCB-1260	2.41	J	10	2.2	ug/Kg		09/06/19 08:42	09/09/19 14:19	1
PCB-1268	ND		10	2.2	ug/Kg		09/06/19 08:42	09/09/19 14:19	1
PCB-1262	ND		10	2.2	ug/Kg		09/06/19 08:42	09/09/19 14:19	1

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Tetrachloro-m-xylene	64		31 - 142			09/06/19 08:42	09/09/19 14:19	1
DCB Decachlorobiphenyl (Surr)	104		20 - 150			09/06/19 08:42	09/09/19 14:19	1

Lab Sample ID: LCS 590-23989/2-A

Matrix: Solid

Analysis Batch: 24016

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 23989

Analyte	MB	MB	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier								
PCB-1016			66.7	64.2		ug/Kg		96	63 - 127	
PCB-1260			66.7	71.6		ug/Kg		107	63 - 128	

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Tetrachloro-m-xylene	37		31 - 142					
DCB Decachlorobiphenyl (Surr)	115		20 - 150					

Lab Sample ID: LCSD 590-23989/3-A

Matrix: Solid

Analysis Batch: 24016

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 23989

Analyte	MB	MB	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
	Result	Qualifier									
PCB-1016			66.7	65.4		ug/Kg		98	63 - 127	2	17
PCB-1260			66.7	76.1		ug/Kg		114	63 - 128	6	11

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Tetrachloro-m-xylene	19	X	31 - 142					
DCB Decachlorobiphenyl (Surr)	132		20 - 150					

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

Lab Sample ID: MB 590-23891/1-A

Matrix: Solid

Analysis Batch: 23886

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23891

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
Diesel Range Organics (DRO) (C10-C25)	ND				10	3.4	mg/Kg		09/03/19 11:22	09/03/19 19:27	1
Residual Range Organics (RRO) (C25-C36)	ND				20	5.0	mg/Kg		09/03/19 11:22	09/03/19 19:27	1

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC)

(Continued)

Lab Sample ID: MB 590-23891/1-A

Matrix: Solid

Analysis Batch: 23886

Surrogate	MB	MB	Limits
	%Recovery	Qualifier	
<i>o</i> -Terphenyl	90		50 - 150
<i>n</i> -Triacontane-d62	73		50 - 150

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 23891

Lab Sample ID: LCS 590-23891/2-A

Matrix: Solid

Analysis Batch: 23886

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.
	Added	Result	Qualifier				
Diesel Range Organics (DRO) (C10-C25)	66.7	66.8		mg/Kg		100	75 - 125
Residual Range Organics (RRO) (C25-C36)	66.7	65.8		mg/Kg		99	60 - 120
Surrogate	LCS	LCS	Limits				
<i>o</i> -Terphenyl	98		50 - 150				
<i>n</i> -Triacontane-d62	101		50 - 150				

Lab Sample ID: LCSD 590-23891/3-A

Matrix: Solid

Analysis Batch: 23886

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD
	Added	Result	Qualifier					
Diesel Range Organics (DRO) (C10-C25)	66.7	61.1		mg/Kg		92	75 - 125	9
Residual Range Organics (RRO) (C25-C36)	66.7	60.5		mg/Kg		91	60 - 120	8
Surrogate	LCSD	LCSD	Limits					
<i>o</i> -Terphenyl	91		50 - 150					
<i>n</i> -Triacontane-d62	91		50 - 150					

Lab Sample ID: 580-88695-1 MS

Matrix: Solid

Analysis Batch: 23886

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier				
Diesel Range Organics (DRO) (C10-C25)	14		83.3	94.3		mg/Kg	⊗	96	75 - 125
Residual Range Organics (RRO) (C25-C36)	110	F1	83.3	239	F1	mg/Kg	⊗	160	60 - 120
Surrogate	MS	MS	Limits						
<i>o</i> -Terphenyl	96		50 - 150						
<i>n</i> -Triacontane-d62	107		50 - 150						

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 23891

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: AK102 & 103 - Alaska - Diesel Range Organics & Residual Range Organics (GC) (Continued)

Lab Sample ID: 580-88695-1 MSD

Matrix: Solid

Analysis Batch: 23886

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec.	%Rec.	RPD
	Result	Qualifier	Added	Result	Qualifier					
Diesel Range Organics (DRO) (C10-C25)	14		81.2	94.0		mg/Kg	⊗	98	75 - 125	0
Residual Range Organics (RRO) (C25-C36)	110	F1	81.2	241	F1	mg/Kg	⊗	167	60 - 120	1
Surrogate										
<i>o</i> -Terphenyl	89			MSD		MSD				
<i>n</i> -Triacantane-d62	100			%Recovery		Qualifier		Limits		

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 580-310416/22-A

Matrix: Solid

Analysis Batch: 310789

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	0.0804	J	0.25	0.050	mg/Kg		09/06/19 10:17	09/10/19 17:28	5
Barium	ND		0.50	0.11	mg/Kg		09/06/19 10:17	09/10/19 17:28	5
Cadmium	ND		0.20	0.039	mg/Kg		09/06/19 10:17	09/10/19 17:28	5
Chromium	0.0546	J	0.25	0.032	mg/Kg		09/06/19 10:17	09/10/19 17:28	5
Lead	ND		0.25	0.024	mg/Kg		09/06/19 10:17	09/10/19 17:28	5
Selenium	0.312	J	0.55	0.14	mg/Kg		09/06/19 10:17	09/10/19 17:28	5
Silver	ND		0.10	0.010	mg/Kg		09/06/19 10:17	09/10/19 17:28	5

Lab Sample ID: LCS 580-310416/23-A

Matrix: Solid

Analysis Batch: 310789

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits	Dil Fac
	Added	Result	Qualifier					
Arsenic	50.0	48.0		mg/Kg		96	80 - 120	
Barium	50.0	44.7		mg/Kg		89	80 - 120	
Cadmium	50.0	45.2		mg/Kg		90	80 - 120	
Chromium	50.0	47.0		mg/Kg		94	80 - 120	
Lead	50.0	46.2		mg/Kg		92	80 - 120	
Selenium	50.0	47.1		mg/Kg		94	80 - 120	
Silver	50.0	46.8		mg/Kg		94	80 - 120	

Lab Sample ID: LCSD 580-310416/24-A

Matrix: Solid

Analysis Batch: 310789

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec.	Limits	RPD	Limit
	Added	Result	Qualifier						
Arsenic	50.0	48.0		mg/Kg		96	80 - 120	0	20
Barium	50.0	44.5		mg/Kg		89	80 - 120	1	20
Cadmium	50.0	44.9		mg/Kg		90	80 - 120	1	20
Chromium	50.0	46.3		mg/Kg		93	80 - 120	1	20
Lead	50.0	45.5		mg/Kg		91	80 - 120	1	20
Selenium	50.0	47.2		mg/Kg		94	80 - 120	0	20

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310416

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-310416/24-A

Matrix: Solid

Analysis Batch: 310789

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 310416

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	RPD	Limit
Silver	50.0	47.4		mg/Kg	95	80 - 120	1	20

Lab Sample ID: 580-88695-1 MS

Matrix: Solid

Analysis Batch: 310789

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310416

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Arsenic	12	B	46.7	64.0		mg/Kg	⊗	110	80 - 120		
Barium	130	F1	46.7	212	F1	mg/Kg	⊗	182	80 - 120		
Cadmium	0.36		46.7	48.5		mg/Kg	⊗	103	80 - 120		
Chromium	22	B	46.7	73.3		mg/Kg	⊗	110	80 - 120		
Lead	7.5		46.7	56.3		mg/Kg	⊗	105	80 - 120		
Selenium	0.76	B	46.7	49.6		mg/Kg	⊗	105	80 - 120		
Silver	0.11		46.7	49.1		mg/Kg	⊗	105	80 - 120		

Lab Sample ID: 580-88695-1 MSD

Matrix: Solid

Analysis Batch: 310789

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310416

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Arsenic	12	B	46.3	64.7		mg/Kg	⊗	113	80 - 120	1	20
Barium	130	F1	46.3	205	F1	mg/Kg	⊗	168	80 - 120	3	20
Cadmium	0.36		46.3	45.9		mg/Kg	⊗	98	80 - 120	5	20
Chromium	22	B	46.3	70.4		mg/Kg	⊗	105	80 - 120	4	20
Lead	7.5		46.3	54.1		mg/Kg	⊗	101	80 - 120	4	20
Selenium	0.76	B	46.3	47.2		mg/Kg	⊗	100	80 - 120	5	20
Silver	0.11		46.3	44.8		mg/Kg	⊗	96	80 - 120	9	20

Lab Sample ID: 580-88695-1 DU

Matrix: Solid

Analysis Batch: 310789

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310416

Analyte	Sample	Sample	Spike	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				
Arsenic	12	B		15.4	F3	mg/Kg	⊗	21	20
Barium	130	F1		140		mg/Kg	⊗	10	20
Cadmium	0.36			0.326		mg/Kg	⊗	9	20
Chromium	22	B		22.7		mg/Kg	⊗	3	20
Lead	7.5			7.55		mg/Kg	⊗	0.8	20
Selenium	0.76	B		0.817		mg/Kg	⊗	7	20
Silver	0.11			0.103		mg/Kg	⊗	10	20

Lab Sample ID: MB 580-310440/22-A

Matrix: Solid

Analysis Batch: 310862

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310440

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.25	0.050	mg/Kg		09/06/19 13:00	09/11/19 06:48	5
Barium	ND		0.50	0.11	mg/Kg		09/06/19 13:00	09/11/19 06:48	5
Cadmium	ND		0.20	0.039	mg/Kg		09/06/19 13:00	09/11/19 06:48	5
Chromium	ND		0.25	0.032	mg/Kg		09/06/19 13:00	09/11/19 06:48	5

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 580-310440/22-A

Matrix: Solid

Analysis Batch: 310862

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310440

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	0.0565	J	0.25	0.024	mg/Kg		09/06/19 13:00	09/11/19 06:48	5
Selenium	ND		0.55	0.14	mg/Kg		09/06/19 13:00	09/11/19 06:48	5
Silver	ND		0.10	0.010	mg/Kg		09/06/19 13:00	09/11/19 06:48	5

Lab Sample ID: LCS 580-310440/23-A

Matrix: Solid

Analysis Batch: 310862

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310440

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits	%Rec.
		Result	Qualifier					
Arsenic	50.0	47.8		mg/Kg		96	80 - 120	
Barium	50.0	44.4		mg/Kg		89	80 - 120	
Cadmium	50.0	45.6		mg/Kg		91	80 - 120	
Chromium	50.0	47.6		mg/Kg		95	80 - 120	
Lead	50.0	49.5		mg/Kg		99	80 - 120	
Selenium	50.0	47.8		mg/Kg		96	80 - 120	
Silver	50.0	46.9		mg/Kg		94	80 - 120	

Lab Sample ID: LCSD 580-310440/24-A

Matrix: Solid

Analysis Batch: 310862

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 310440

Analyte	Spike Added	LCSD		Unit	D	%Rec	Limits	RPD	Limit
		Result	Qualifier						
Arsenic	50.0	45.1		mg/Kg		90	80 - 120	6	20
Barium	50.0	42.5		mg/Kg		85	80 - 120	4	20
Cadmium	50.0	43.3		mg/Kg		87	80 - 120	5	20
Chromium	50.0	45.4		mg/Kg		91	80 - 120	5	20
Lead	50.0	47.1		mg/Kg		94	80 - 120	5	20
Selenium	50.0	45.8		mg/Kg		92	80 - 120	4	20
Silver	50.0	44.6		mg/Kg		89	80 - 120	5	20

Lab Sample ID: MB 580-310295/24-A

Matrix: Water

Analysis Batch: 310554

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 310295

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.000644	J	0.0010	0.00020	mg/L		09/05/19 11:27	09/06/19 19:16	1
Barium	ND		0.0012	0.00021	mg/L		09/05/19 11:27	09/06/19 19:16	1
Cadmium	ND		0.00040	0.00010	mg/L		09/05/19 11:27	09/06/19 19:16	1
Chromium	ND		0.00040	0.00017	mg/L		09/05/19 11:27	09/06/19 19:16	1
Lead	ND		0.00080	0.00020	mg/L		09/05/19 11:27	09/06/19 19:16	1
Selenium	ND		0.0080	0.0021	mg/L		09/05/19 11:27	09/06/19 19:16	1
Silver	ND		0.00040	0.000055	mg/L		09/05/19 11:27	09/06/19 19:16	1

Lab Sample ID: LCS 580-310295/25-A

Matrix: Water

Analysis Batch: 310554

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 310295

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Arsenic	1.00	1.01		mg/L		101	80 - 120
Barium	1.00	0.934		mg/L		93	80 - 120

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-310295/25-A

Matrix: Water

Analysis Batch: 310554

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 310295

%Rec.

Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	
Cadmium	1.00	0.952		mg/L	95	80 - 120	
Chromium	1.00	0.961		mg/L	96	80 - 120	
Lead	1.00	0.958		mg/L	96	80 - 120	
Selenium	1.00	0.991		mg/L	99	80 - 120	
Silver	1.00	0.946		mg/L	95	80 - 120	

Lab Sample ID: LCSD 580-310295/26-A

Matrix: Water

Analysis Batch: 310554

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 310295

%Rec.

RPD

Limit

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	1.00	0.994		mg/L	99	80 - 120		1	20
Barium	1.00	0.907		mg/L	91	80 - 120		3	20
Cadmium	1.00	0.927		mg/L	93	80 - 120		3	20
Chromium	1.00	0.952		mg/L	95	80 - 120		1	20
Lead	1.00	0.934		mg/L	93	80 - 120		2	20
Selenium	1.00	0.977		mg/L	98	80 - 120		1	20
Silver	1.00	0.923		mg/L	92	80 - 120		2	20

Lab Sample ID: MB 580-310178/1-C

Matrix: Water

Analysis Batch: 310658

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 310417

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.000596	J	0.0010	0.00020	mg/L		09/06/19 10:36	09/09/19 23:29	1
Barium	ND		0.0012	0.00021	mg/L		09/06/19 10:36	09/09/19 23:29	1
Cadmium	ND		0.00040	0.00010	mg/L		09/06/19 10:36	09/09/19 23:29	1
Chromium	ND		0.00040	0.00017	mg/L		09/06/19 10:36	09/09/19 23:29	1
Lead	ND		0.00080	0.00020	mg/L		09/06/19 10:36	09/09/19 23:29	1
Selenium	ND		0.0080	0.0021	mg/L		09/06/19 10:36	09/09/19 23:29	1
Silver	ND		0.00040	0.000055	mg/L		09/06/19 10:36	09/09/19 23:29	1

Lab Sample ID: LCS 580-310178/2-C

Matrix: Water

Analysis Batch: 310658

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Prep Batch: 310417

%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	1.00	0.963		mg/L	96	80 - 120	
Barium	1.00	0.981		mg/L	98	80 - 120	
Cadmium	1.00	0.949		mg/L	95	80 - 120	
Chromium	1.00	0.975		mg/L	98	80 - 120	
Lead	1.00	0.938		mg/L	94	80 - 120	
Selenium	1.00	0.960		mg/L	96	80 - 120	
Silver	1.00	1.00		mg/L	100	80 - 120	

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 6020A - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-310178/3-C

Matrix: Water

Analysis Batch: 310658

Client Sample ID: Lab Control Sample Dup

Prep Type: Dissolved

Prep Batch: 310417

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
Arsenic	1.00	0.965		mg/L	96	80 - 120	0	20	
Barium	1.00	1.04		mg/L	104	80 - 120	6	20	
Cadmium	1.00	0.989		mg/L	99	80 - 120	4	20	
Chromium	1.00	0.984		mg/L	98	80 - 120	1	20	
Lead	1.00	0.950		mg/L	95	80 - 120	1	20	
Selenium	1.00	0.964		mg/L	96	80 - 120	0	20	
Silver	1.00	1.06		mg/L	106	80 - 120	6	20	

Lab Sample ID: 580-88695-23 MS

Matrix: Water

Analysis Batch: 310658

Client Sample ID: TR-10-W

Prep Type: Dissolved

Prep Batch: 310417

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
Analyte	Result	Qualifier		Result	Qualifier	Unit	D	Limits	Limits
Arsenic	0.0075	B	1.00	1.04		mg/L	103	80 - 120	
Barium	0.022		1.00	1.08		mg/L	106	80 - 120	
Cadmium	0.00042		1.00	1.03		mg/L	102	80 - 120	
Chromium	0.0019		1.00	1.04		mg/L	104	80 - 120	
Lead	0.00042	J	1.00	1.04		mg/L	104	80 - 120	
Selenium	ND		1.00	1.02		mg/L	102	80 - 120	
Silver	0.00014	J	1.00	0.994		mg/L	99	80 - 120	

Lab Sample ID: 580-88695-23 MSD

Matrix: Water

Analysis Batch: 310658

Client Sample ID: TR-10-W

Prep Type: Dissolved

Prep Batch: 310417

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.
Analyte	Result	Qualifier		Result	Qualifier	Unit	D	Limits	RPD
Arsenic	0.0075	B	1.00	1.03		mg/L	103	80 - 120	0
Barium	0.022		1.00	1.08		mg/L	106	80 - 120	0
Cadmium	0.00042		1.00	1.04		mg/L	104	80 - 120	1
Chromium	0.0019		1.00	1.05		mg/L	105	80 - 120	1
Lead	0.00042	J	1.00	1.06		mg/L	106	80 - 120	2
Selenium	ND		1.00	1.03		mg/L	103	80 - 120	2
Silver	0.00014	J	1.00	0.987		mg/L	99	80 - 120	1

Lab Sample ID: 580-88695-23 DU

Matrix: Water

Analysis Batch: 310658

Client Sample ID: TR-10-W

Prep Type: Dissolved

Prep Batch: 310417

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D		RPD
Analyte	Result	Qualifier		Result	Qualifier	Unit	D		Limit
Arsenic	0.0075	B		0.00718		mg/L			5
Barium	0.022			0.0234		mg/L			5
Cadmium	0.00042			ND		mg/L			NC
Chromium	0.0019			0.00165		mg/L			16
Lead	0.00042	J		ND		mg/L			NC
Selenium	ND			ND		mg/L			NC
Silver	0.00014	J		ND		mg/L			NC

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 580-309679/22-A

Matrix: Water

Analysis Batch: 309796

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 309679

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		08/29/19 09:58	08/29/19 14:32	1

Lab Sample ID: LCS 580-309679/23-A

Matrix: Water

Analysis Batch: 309796

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 309679

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Mercury	0.00200	0.00207		mg/L		103	80 - 120

Lab Sample ID: LCSD 580-309679/24-A

Matrix: Water

Analysis Batch: 309796

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 309679

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit
Mercury	0.00200	0.00205		mg/L		102	80 - 120	1 20

Lab Sample ID: MB 580-310025/9-A

Matrix: Water

Analysis Batch: 310145

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310025

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/03/19 08:27	09/03/19 18:18	1

Lab Sample ID: LCS 580-310025/10-A

Matrix: Water

Analysis Batch: 310145

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310025

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Mercury	0.00200	0.00195		mg/L		98	80 - 120

Lab Sample ID: LCSD 580-310025/11-A

Matrix: Water

Analysis Batch: 310145

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 310025

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit
Mercury	0.00200	0.00176		mg/L		88	80 - 120	10 20

Lab Sample ID: 580-88695-25 MS

Matrix: Water

Analysis Batch: 310145

Client Sample ID: TR-12-W

Prep Type: Total/NA

Prep Batch: 310025

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Mercury	ND		0.00200	0.00193		mg/L		96	80 - 120

Lab Sample ID: 580-88695-25 MSD

Matrix: Water

Analysis Batch: 310145

Client Sample ID: TR-12-W

Prep Type: Total/NA

Prep Batch: 310025

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	Limit
Mercury	ND		0.00200	0.00180		mg/L		90	80 - 120	7 20

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 7470A - Mercury (CVAA)

Lab Sample ID: 580-88695-25 DU

Matrix: Water

Analysis Batch: 310145

Client Sample ID: TR-12-W

Prep Type: Total/NA

Prep Batch: 310025

1

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Mercury	ND		ND		mg/L		NC	20

Lab Sample ID: MB 580-310178/1-D

Matrix: Water

Analysis Batch: 310653

Client Sample ID: Method Blank

Prep Type: Dissolved

Prep Batch: 310505

2

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00030	0.00015	mg/L		09/07/19 11:57	09/09/19 16:42	1

Lab Sample ID: LCS 580-310178/2-D

Matrix: Water

Analysis Batch: 310653

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Prep Batch: 310505

3

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Mercury	0.00200	0.00181		mg/L		91	80 - 120

Lab Sample ID: LCSD 580-310178/3-D

Matrix: Water

Analysis Batch: 310653

Client Sample ID: Lab Control Sample Dup

Prep Type: Dissolved

Prep Batch: 310505

4

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit
Mercury	0.00200	0.00207		mg/L		104	80 - 120	13

Lab Sample ID: 580-88695-24 MS

Matrix: Water

Analysis Batch: 310653

Client Sample ID: TR-11-W

Prep Type: Dissolved

Prep Batch: 310505

5

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Mercury	ND		0.00200	0.00170		mg/L		85	80 - 120

Lab Sample ID: 580-88695-24 MSD

Matrix: Water

Analysis Batch: 310653

Client Sample ID: TR-11-W

Prep Type: Dissolved

Prep Batch: 310505

6

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
Mercury	ND		0.00200	0.00179		mg/L		89	80 - 120	5	20

Lab Sample ID: 580-88695-24 DU

Matrix: Water

Analysis Batch: 310653

Client Sample ID: TR-11-W

Prep Type: Dissolved

Prep Batch: 310505

7

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	Limit
Mercury	ND		ND		mg/L		NC	20

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-310557/22-A

Matrix: Solid

Analysis Batch: 310631

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 310557

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.030	0.0090	mg/Kg		09/09/19 10:05	09/09/19 14:53	1

Lab Sample ID: LCS 580-310557/23-A

Matrix: Solid

Analysis Batch: 310631

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 310557

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Mercury	0.167	0.155		mg/Kg		93	80 - 120

Lab Sample ID: LCSD 580-310557/24-A

Matrix: Solid

Analysis Batch: 310631

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 310557

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit	
Mercury	0.167	0.152		mg/Kg		91	80 - 120	2	20

Lab Sample ID: 580-88695-1 MS

Matrix: Solid

Analysis Batch: 310631

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310557

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Mercury	0.12		0.171	0.269		mg/Kg		90	80 - 120

Lab Sample ID: 580-88695-1 MSD

Matrix: Solid

Analysis Batch: 310631

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310557

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	Limit	
Mercury	0.12		0.171	0.319		mg/Kg		119	80 - 120	17	20

Lab Sample ID: 580-88695-1 DU

Matrix: Solid

Analysis Batch: 310631

Client Sample ID: TP-04-SO

Prep Type: Total/NA

Prep Batch: 310557

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Mercury	0.12		0.0798	F3	mg/Kg		36	20

Method: 2540G - SM 2540G

Lab Sample ID: 580-88695-16 DU

Matrix: Solid

Analysis Batch: 309887

Client Sample ID: TS-07-SO

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Percent Solids	81.5		82.4		%		1	20
Percent Moisture	18.5		17.6		%		5	20

Eurofins TestAmerica, Seattle

QC Sample Results

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Method: SM 2340C - Hardness, Total (mg/l as CaCO₃)

Lab Sample ID: MB 580-310101/1

Matrix: Water

Analysis Batch: 310101

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	ND		2.0	2.0	mg/L			09/03/19 14:56	1

Lab Sample ID: LCS 580-310101/2

Matrix: Water

Analysis Batch: 310101

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Hardness as calcium carbonate	1000	1040		mg/L		104	90 - 110

Lab Sample ID: 580-88695-21 DU

Matrix: Water

Analysis Batch: 310101

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Hardness as calcium carbonate	47		47.0		mg/L		0	20

Client Sample ID: Method Blank

Prep Type: Total/NA

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Client Sample ID: TS-16-W

Prep Type: Total/NA

Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-04-SO
Date Collected: 08/22/19 11:47
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TP-04-SO
Date Collected: 08/22/19 11:47
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-1
Matrix: Solid
Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			310196	09/04/19 12:48	TCH	TAL SEA
Total/NA	Analysis	8260C		1	310228	09/04/19 20:09	CJ	TAL SEA
Total/NA	Prep	5035			310305	09/05/19 14:04	TCH	TAL SEA
Total/NA	Analysis	8260C SIM		1	310347	09/05/19 19:27	APR	TAL SEA
Total/NA	Prep	5035	RA		311201	09/14/19 14:31	APR	TAL SEA
Total/NA	Analysis	8260C SIM	RA	1	311181	09/14/19 20:05	APR	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D		1	310468	09/06/19 19:29	CJ	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		1	310163	09/04/19 16:59	T1W	TAL SEA
Total/NA	Prep	8011			310972	09/12/19 10:55	CJB	TAL SEA
Total/NA	Analysis	8011		1	311024	09/12/19 18:39	CJ	TAL SEA
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		1	23886	09/03/19 20:26	NMI	TAL SPK
Total/NA	Prep	3050B			310416	09/06/19 10:17	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310789	09/10/19 17:33	FCW	TAL SEA
Total/NA	Prep	7471A			310557	09/09/19 10:05	JCP	TAL SEA
Total/NA	Analysis	7471A		1	310631	09/09/19 15:01	T1H	TAL SEA

Client Sample ID: TP-01-SO
Date Collected: 08/22/19 11:27
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TP-01-SO
Date Collected: 08/22/19 11:27
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-2
Matrix: Solid
Percent Solids: 71.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			310196	09/04/19 12:48	TCH	TAL SEA
Total/NA	Analysis	8260C		1	310228	09/04/19 20:35	CJ	TAL SEA
Total/NA	Prep	5035			310305	09/05/19 14:04	TCH	TAL SEA
Total/NA	Analysis	8260C SIM		1	310347	09/05/19 19:53	APR	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D		25	310468	09/06/19 20:40	CJ	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-01-SO

Date Collected: 08/22/19 11:27

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-2

Matrix: Solid

Percent Solids: 71.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		20	310297	09/05/19 13:36	CJ	TAL SEA
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		10	23886	09/03/19 21:25	NMI	TAL SPK
Total/NA	Prep	3050B			310416	09/06/19 10:17	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310789	09/10/19 18:21	FCW	TAL SEA

Client Sample ID: TP-02-SO

Date Collected: 08/22/19 11:40

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TP-02-SO

Date Collected: 08/22/19 11:40

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-3

Matrix: Solid

Percent Solids: 70.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D		10	310468	09/06/19 21:04	CJ	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		1	310163	09/04/19 18:31	T1W	TAL SEA
Total/NA	Prep	8011			310074	09/03/19 16:43	JCM	TAL SEA
Total/NA	Analysis	8011		1	310465	09/06/19 20:16	W1T	TAL SEA
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		10	23886	09/03/19 21:44	NMI	TAL SPK
Total/NA	Prep	3050B			310416	09/06/19 10:17	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310789	09/10/19 18:25	FCW	TAL SEA

Client Sample ID: TP-03-SO

Date Collected: 08/22/19 11:43

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TP-03-SO

Date Collected: 08/22/19 11:43

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-4

Matrix: Solid

Percent Solids: 74.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D		1	310468	09/06/19 21:28	CJ	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		1	310163	09/04/19 18:54	T1W	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-03-SO

Date Collected: 08/22/19 11:43

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-4

Matrix: Solid

Percent Solids: 74.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		1	23886	09/03/19 22:23	NMI	TAL SPK

Client Sample ID: TP-05-SO

Date Collected: 08/22/19 11:54

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TP-05-SO

Date Collected: 08/22/19 11:54

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-5

Matrix: Solid

Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D		1	310468	09/06/19 21:52	CJ	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		1	310163	09/04/19 19:17	T1W	TAL SEA
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		1	23886	09/03/19 22:43	NMI	TAL SPK

Client Sample ID: TP-06-SO

Date Collected: 08/22/19 12:03

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-6

Matrix: Solid

Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TP-06-SO

Date Collected: 08/22/19 12:03

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-6

Matrix: Solid

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			310196	09/04/19 12:48	TCH	TAL SEA
Total/NA	Analysis	8260C		1	310228	09/04/19 21:00	CJ	TAL SEA
Total/NA	Prep	5035			310305	09/05/19 14:04	TCH	TAL SEA
Total/NA	Analysis	8260C SIM		1	310347	09/05/19 20:19	APR	TAL SEA
Total/NA	Prep	5035	RA		311201	09/14/19 14:31	APR	TAL SEA
Total/NA	Analysis	8260C SIM	RA	1	311181	09/14/19 20:31	APR	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D		10	310468	09/06/19 22:15	CJ	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		5	310163	09/04/19 19:40	T1W	TAL SEA
Total/NA	Prep	8011			310074	09/03/19 16:43	JCM	TAL SEA
Total/NA	Analysis	8011		1	310465	09/06/19 20:32	W1T	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-06-SO

Date Collected: 08/22/19 12:03

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-6

Matrix: Solid

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			23989	09/06/19 08:42	AMB	TAL SPK
Total/NA	Analysis	8082A		1	24016	09/09/19 13:37	NMI	TAL SPK
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		10	23886	09/03/19 23:03	NMI	TAL SPK
Total/NA	Prep	3050B			310416	09/06/19 10:17	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310789	09/10/19 18:29	FCW	TAL SEA
Total/NA	Prep	7471A			310557	09/09/19 10:05	JCP	TAL SEA
Total/NA	Analysis	7471A		1	310631	09/09/19 15:11	T1H	TAL SEA

Client Sample ID: TP-07-SO

Date Collected: 08/22/19 12:09

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-7

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TP-07-SO

Date Collected: 08/22/19 12:09

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-7

Matrix: Solid

Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			310196	09/04/19 12:48	TCH	TAL SEA
Total/NA	Analysis	8260C		1	310228	09/04/19 21:25	CJ	TAL SEA
Total/NA	Prep	5035			310305	09/05/19 14:04	TCH	TAL SEA
Total/NA	Analysis	8260C SIM		1	310347	09/05/19 20:45	APR	TAL SEA
Total/NA	Prep	5035	RA		311201	09/14/19 14:31	APR	TAL SEA
Total/NA	Analysis	8260C SIM	RA	1	311181	09/14/19 20:57	APR	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D		25	310468	09/06/19 22:39	CJ	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		20	310297	09/05/19 13:59	CJ	TAL SEA
Total/NA	Prep	3550C			23989	09/06/19 08:42	AMB	TAL SPK
Total/NA	Analysis	8082A		1	24016	09/09/19 13:58	NMI	TAL SPK
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		10	23933	09/05/19 00:46	NMI	TAL SPK
Total/NA	Prep	3050B			310416	09/06/19 10:17	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310789	09/10/19 18:34	FCW	TAL SEA

Client Sample ID: TP-08-SO

Date Collected: 08/22/19 12:05

Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-8

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TP-08-SO
Date Collected: 08/22/19 12:05
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-8
Matrix: Solid
Percent Solids: 86.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			310196	09/04/19 12:48	TCH	TAL SEA
Total/NA	Analysis	8260C		1	310228	09/04/19 21:50	CJ	TAL SEA
Total/NA	Prep	5035			310305	09/05/19 14:04	TCH	TAL SEA
Total/NA	Analysis	8260C SIM		1	310347	09/05/19 21:10	APR	TAL SEA
Total/NA	Prep	5035	RA		311201	09/14/19 14:31	APR	TAL SEA
Total/NA	Analysis	8260C SIM	RA	1	311181	09/14/19 21:22	APR	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D		10	310468	09/06/19 23:03	CJ	TAL SEA
Total/NA	Prep	3550B			310147	09/04/19 09:12	FCG	TAL SEA
Total/NA	Analysis	8270D SIM		5	310163	09/04/19 20:27	T1W	TAL SEA
Total/NA	Prep	8011			310074	09/03/19 16:43	JCM	TAL SEA
Total/NA	Analysis	8011		1	310465	09/06/19 20:48	W1T	TAL SEA
Total/NA	Prep	3550C			23989	09/06/19 08:42	AMB	TAL SPK
Total/NA	Analysis	8082A		1	24016	09/09/19 14:39	NMI	TAL SPK
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		20	23886	09/03/19 23:42	NMI	TAL SPK
Total/NA	Prep	3050B			310416	09/06/19 10:17	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310789	09/10/19 18:38	FCW	TAL SEA
Total/NA	Prep	7471A			310557	09/09/19 10:05	JCP	TAL SEA
Total/NA	Analysis	7471A		1	310631	09/09/19 15:13	T1H	TAL SEA

Client Sample ID: Trip Blank
Date Collected: 08/22/19 00:01
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			310196	09/04/19 12:48	TCH	TAL SEA
Total/NA	Analysis	8260C		1	310228	09/04/19 22:15	CJ	TAL SEA
Total/NA	Prep	5035			310305	09/05/19 14:04	TCH	TAL SEA
Total/NA	Analysis	8260C SIM		1	310347	09/05/19 19:01	APR	TAL SEA
Total/NA	Prep	5035	RA		311201	09/14/19 14:31	APR	TAL SEA
Total/NA	Analysis	8260C SIM	RA	1	311181	09/14/19 19:39	APR	TAL SEA

Client Sample ID: Trip Blank
Date Collected: 08/20/19 00:01
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309944	08/30/19 20:41	JSM	TAL SEA
Total/NA	Analysis	8260C		1	310039	08/31/19 10:11	JSM	TAL SEA
Total/NA	Prep	5035			309975	09/01/19 13:41	APR	TAL SEA
Total/NA	Analysis	8260C SIM		1	309985	09/02/19 05:01	APR	TAL SEA

Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-01-SO
Date Collected: 08/20/19 16:15
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TS-01-SO
Date Collected: 08/20/19 16:15
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-11
Matrix: Solid
Percent Solids: 84.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309944	08/30/19 20:41	JSM	TAL SEA
Total/NA	Analysis	8260C		1	310039	08/31/19 15:58	JSM	TAL SEA
Total/NA	Prep	5035			311029	09/11/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C		1	311062	09/12/19 06:22	CJ	TAL SEA
Total/NA	Prep	5035			309975	09/01/19 13:41	APR	TAL SEA
Total/NA	Analysis	8260C SIM		1	309985	09/02/19 08:29	APR	TAL SEA
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D		1	310262	09/05/19 16:48	T1W	TAL SEA
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D SIM		1	310163	09/04/19 12:45	T1W	TAL SEA
Total/NA	Prep	8011			310074	09/03/19 12:34	JCM	TAL SEA
Total/NA	Analysis	8011		1	310465	09/06/19 18:09	W1T	TAL SEA
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		1	23886	09/04/19 00:02	NMI	TAL SPK
Total/NA	Prep	3050B			310416	09/06/19 10:17	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310789	09/10/19 18:42	FCW	TAL SEA
Total/NA	Prep	7471A			310557	09/09/19 10:05	JCP	TAL SEA
Total/NA	Analysis	7471A		1	310631	09/09/19 15:16	T1H	TAL SEA

Client Sample ID: TS-02-SO
Date Collected: 08/20/19 15:28
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TS-02-SO
Date Collected: 08/20/19 15:28
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-12
Matrix: Solid
Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309944	08/30/19 20:41	JSM	TAL SEA
Total/NA	Analysis	8260C		1	310039	08/31/19 16:23	JSM	TAL SEA
Total/NA	Prep	5035	RA		311029	09/11/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C	RA	1	311062	09/12/19 06:47	CJ	TAL SEA
Total/NA	Prep	5035			309975	09/01/19 13:41	APR	TAL SEA
Total/NA	Analysis	8260C SIM		1	309985	09/02/19 08:56	APR	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-02-SO
Date Collected: 08/20/19 15:28
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-12
Matrix: Solid
Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D		1	310262	09/05/19 18:00	T1W	TAL SEA
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D SIM		1	310163	09/04/19 13:54	T1W	TAL SEA
Total/NA	Prep	8011			310074	09/03/19 12:34	JCM	TAL SEA
Total/NA	Analysis	8011		1	310465	09/06/19 18:25	W1T	TAL SEA
Total/NA	Prep	3550C			23989	09/06/19 08:42	AMB	TAL SPK
Total/NA	Analysis	8082A		1	24016	09/09/19 15:00	NMI	TAL SPK
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		1	23886	09/04/19 00:21	NMI	TAL SPK
Total/NA	Prep	3050B			310440	09/06/19 13:00	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310925	09/11/19 19:32	FCW	TAL SEA
Total/NA	Prep	3050B			310440	09/06/19 13:00	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310862	09/11/19 09:05	FCW	TAL SEA
Total/NA	Prep	7471A			310557	09/09/19 10:05	JCP	TAL SEA
Total/NA	Analysis	7471A		1	310631	09/09/19 15:28	T1H	TAL SEA

Client Sample ID: TS-03-SO
Date Collected: 08/20/19 15:38
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TS-03-SO
Date Collected: 08/20/19 15:38
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-13
Matrix: Solid
Percent Solids: 70.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309944	08/30/19 20:41	JSM	TAL SEA
Total/NA	Analysis	8260C		1	310039	08/31/19 16:48	JSM	TAL SEA
Total/NA	Prep	5035	RA		311029	09/11/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C	RA	1	311062	09/12/19 07:12	CJ	TAL SEA
Total/NA	Prep	5035			310134	09/03/19 17:49	APR	TAL SEA
Total/NA	Analysis	8260C SIM		1	310106	09/04/19 14:08	CJ	TAL SEA
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D		1	310262	09/05/19 18:23	T1W	TAL SEA
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D SIM		1	310163	09/04/19 14:17	T1W	TAL SEA
Total/NA	Prep	8011			310074	09/03/19 12:34	JCM	TAL SEA
Total/NA	Analysis	8011		1	310465	09/06/19 18:41	W1T	TAL SEA
Total/NA	Prep	3550C			23989	09/06/19 08:42	AMB	TAL SPK
Total/NA	Analysis	8082A		1	24016	09/09/19 15:20	NMI	TAL SPK
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		1	23886	09/04/19 00:41	NMI	TAL SPK

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-03-SO
Date Collected: 08/20/19 15:38
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-13
Matrix: Solid
Percent Solids: 70.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			310440	09/06/19 13:00	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310925	09/11/19 19:36	FCW	TAL SEA
Total/NA	Prep	3050B			310440	09/06/19 13:00	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310862	09/11/19 09:10	FCW	TAL SEA
Total/NA	Prep	7471A			310557	09/09/19 10:05	JCP	TAL SEA
Total/NA	Analysis	7471A		1	310631	09/09/19 15:31	T1H	TAL SEA

Client Sample ID: TS-04-SO
Date Collected: 08/20/19 15:43
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TS-04-SO
Date Collected: 08/20/19 15:43
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-14
Matrix: Solid
Percent Solids: 72.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309944	08/30/19 20:41	JSM	TAL SEA
Total/NA	Analysis	8260C		1	310039	08/31/19 17:14	JSM	TAL SEA
Total/NA	Prep	5035	RA		311029	09/11/19 08:00	ASJ	TAL SEA
Total/NA	Analysis	8260C	RA	1	311062	09/12/19 07:37	CJ	TAL SEA
Total/NA	Prep	5035			310134	09/03/19 17:49	APR	TAL SEA
Total/NA	Analysis	8260C SIM		1	310106	09/04/19 14:34	CJ	TAL SEA
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D		1	310262	09/05/19 18:47	T1W	TAL SEA
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D SIM		1	310163	09/04/19 14:40	T1W	TAL SEA
Total/NA	Prep	8011			310074	09/03/19 12:39	JCM	TAL SEA
Total/NA	Analysis	8011		1	310465	09/06/19 19:12	W1T	TAL SEA
Total/NA	Prep	3550C			23989	09/06/19 08:42	AMB	TAL SPK
Total/NA	Analysis	8082A		1	24016	09/09/19 15:41	NMI	TAL SPK
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		1	23886	09/04/19 01:00	NMI	TAL SPK
Total/NA	Prep	3050B			310440	09/06/19 13:00	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310925	09/11/19 19:40	FCW	TAL SEA
Total/NA	Prep	3050B			310440	09/06/19 13:00	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310862	09/11/19 09:15	FCW	TAL SEA
Total/NA	Prep	7471A			310557	09/09/19 10:05	JCP	TAL SEA
Total/NA	Analysis	7471A		1	310631	09/09/19 15:33	T1H	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-05-SO
Date Collected: 08/20/19 15:52
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TS-05-SO
Date Collected: 08/20/19 15:52
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-15
Matrix: Solid
Percent Solids: 64.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309944	08/30/19 20:41	JSM	TAL SEA
Total/NA	Analysis	8260C		1	310039	08/31/19 17:39	JSM	TAL SEA
Total/NA	Prep	5035			310134	09/03/19 17:49	APR	TAL SEA
Total/NA	Analysis	8260C SIM		1	310106	09/04/19 15:01	CJ	TAL SEA
Total/NA	Prep	5035	RA		311201	09/14/19 14:31	APR	TAL SEA
Total/NA	Analysis	8260C SIM	RA	1	311181	09/14/19 22:40	APR	TAL SEA
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D		10	310262	09/05/19 19:11	T1W	TAL SEA
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D SIM		10	310163	09/04/19 15:03	T1W	TAL SEA
Total/NA	Prep	8011			310074	09/03/19 12:39	JCM	TAL SEA
Total/NA	Analysis	8011		1	310465	09/06/19 19:28	W1T	TAL SEA
Total/NA	Prep	3550C			23989	09/06/19 08:42	AMB	TAL SPK
Total/NA	Analysis	8082A		1	24016	09/09/19 16:01	NMI	TAL SPK
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		5	23886	09/04/19 01:20	NMI	TAL SPK
Total/NA	Prep	3050B			310440	09/06/19 13:00	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310925	09/11/19 19:45	FCW	TAL SEA
Total/NA	Prep	3050B			310440	09/06/19 13:00	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310862	09/11/19 09:20	FCW	TAL SEA
Total/NA	Prep	7471A			310557	09/09/19 10:05	JCP	TAL SEA
Total/NA	Analysis	7471A		1	310631	09/09/19 15:36	T1H	TAL SEA

Client Sample ID: TS-07-SO
Date Collected: 08/20/19 16:01
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	309887	08/30/19 14:26	JCM	TAL SEA

Client Sample ID: TS-07-SO
Date Collected: 08/20/19 16:01
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-16
Matrix: Solid
Percent Solids: 81.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			309944	08/30/19 20:41	JSM	TAL SEA
Total/NA	Analysis	8260C		1	310039	08/31/19 18:04	JSM	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TS-07-SO
Date Collected: 08/20/19 16:01
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-16
Matrix: Solid
Percent Solids: 81.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			310134	09/03/19 17:49	APR	TAL SEA
Total/NA	Analysis	8260C SIM		1	310106	09/04/19 15:27	CJ	TAL SEA
Total/NA	Prep	5035	RA		311201	09/14/19 14:31	APR	TAL SEA
Total/NA	Analysis	8260C SIM	RA	1	311181	09/14/19 23:07	APR	TAL SEA
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D		1	310262	09/05/19 19:34	T1W	TAL SEA
Total/NA	Prep	3550B			310035	09/03/19 09:39	MLT	TAL SEA
Total/NA	Analysis	8270D SIM		1	310163	09/04/19 15:27	T1W	TAL SEA
Total/NA	Prep	8011			310074	09/03/19 12:39	JCM	TAL SEA
Total/NA	Analysis	8011		1	310465	09/06/19 19:44	W1T	TAL SEA
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		1	23886	09/04/19 01:59	NMI	TAL SPK
Total/NA	Prep	3050B			310440	09/06/19 13:00	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310925	09/11/19 19:49	FCW	TAL SEA
Total/NA	Prep	3050B			310440	09/06/19 13:00	JCP	TAL SEA
Total/NA	Analysis	6020A		5	310862	09/11/19 09:25	FCW	TAL SEA
Total/NA	Prep	7471A			310557	09/09/19 10:05	JCP	TAL SEA
Total/NA	Analysis	7471A		1	310631	09/09/19 15:38	T1H	TAL SEA

Client Sample ID: TD-01-SO
Date Collected: 08/21/19 13:43
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23862	08/30/19 15:02	CWD	TAL SPK

Client Sample ID: TD-01-SO
Date Collected: 08/21/19 13:43
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-17
Matrix: Solid
Percent Solids: 56.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		10	23886	09/04/19 02:19	NMI	TAL SPK

Client Sample ID: TD-07-SO
Date Collected: 08/21/19 13:43
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	23862	08/30/19 15:02	CWD	TAL SPK

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Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TD-07-SO

Date Collected: 08/21/19 13:43
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-18

Matrix: Solid

Percent Solids: 59.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3550C			23891	09/03/19 11:22	AMB	TAL SPK
Total/NA	Analysis	AK102 & 103		10	23886	09/04/19 02:39	NMI	TAL SPK

Client Sample ID: TS-08-W

Date Collected: 08/21/19 10:55
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-19

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	309932	08/31/19 01:35	TL1	TAL SEA
Total/NA	Prep	3520C			309543	08/28/19 09:48	N1C	TAL SEA
Total/NA	Analysis	8270D SIM		1	310259	09/05/19 12:29	CJ	TAL SEA

Client Sample ID: TS-09-W

Date Collected: 08/21/19 10:52
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-20

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	309932	08/31/19 01:59	TL1	TAL SEA
Total/NA	Prep	3520C			309543	08/28/19 09:48	N1C	TAL SEA
Total/NA	Analysis	8270D SIM		1	310259	09/05/19 12:53	CJ	TAL SEA

Client Sample ID: TS-16-W

Date Collected: 08/21/19 10:50
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-21

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			310295	09/05/19 11:27	A1B	TAL SEA
Total Recoverable	Analysis	6020A		1	310554	09/06/19 20:13	FCW	TAL SEA
Total/NA	Prep	7470A			309679	08/29/19 09:58	A1B	TAL SEA
Total/NA	Analysis	7470A		1	309796	08/29/19 15:33	T1H	TAL SEA
Total/NA	Analysis	SM 2340C		1	310101	09/03/19 14:56	ESB	TAL SEA

Client Sample ID: TR-15-W

Date Collected: 08/21/19 12:04
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-22

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	3005A			310417	09/06/19 10:36	ART	TAL SEA
Dissolved	Analysis	6020A		1	310658	09/10/19 00:22	FCW	TAL SEA
Total Recoverable	Prep	3005A			310295	09/05/19 11:27	A1B	TAL SEA
Total Recoverable	Analysis	6020A		1	310554	09/06/19 20:17	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	7470A			310505	09/07/19 11:57	ART	TAL SEA
Dissolved	Analysis	7470A		1	310653	09/09/19 17:13	A1B	TAL SEA

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Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TR-15-W
Date Collected: 08/21/19 12:04
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-22
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	7470A			309679	08/29/19 09:58	A1B	TAL SEA
Total/NA	Analysis	7470A		1	309796	08/29/19 15:35	T1H	TAL SEA
Total/NA	Analysis	SM 2340C		1	310101	09/03/19 14:56	ESB	TAL SEA

Client Sample ID: TR-10-W
Date Collected: 08/21/19 14:08
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-23
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	3005A			310417	09/06/19 10:36	ART	TAL SEA
Dissolved	Analysis	6020A		1	310658	09/09/19 23:34	FCW	TAL SEA
Total Recoverable	Prep	3005A			310295	09/05/19 11:27	A1B	TAL SEA
Total Recoverable	Analysis	6020A		1	310554	09/06/19 20:22	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	7470A			310505	09/07/19 11:57	ART	TAL SEA
Dissolved	Analysis	7470A		1	310653	09/09/19 17:15	A1B	TAL SEA
Total/NA	Prep	7470A			310025	09/03/19 08:27	ART	TAL SEA
Total/NA	Analysis	7470A		1	310145	09/03/19 18:54	T1H	TAL SEA
Total/NA	Analysis	SM 2340C		1	310101	09/03/19 14:56	ESB	TAL SEA

Client Sample ID: TR-11-W
Date Collected: 08/21/19 14:12
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-24
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	3005A			310417	09/06/19 10:36	ART	TAL SEA
Dissolved	Analysis	6020A		1	310658	09/10/19 00:26	FCW	TAL SEA
Total Recoverable	Prep	3005A			310295	09/05/19 11:27	A1B	TAL SEA
Total Recoverable	Analysis	6020A		1	310554	09/06/19 20:26	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	7470A			310505	09/07/19 11:57	ART	TAL SEA
Dissolved	Analysis	7470A		1	310653	09/09/19 16:50	A1B	TAL SEA
Total/NA	Prep	7470A			310025	09/03/19 08:27	ART	TAL SEA
Total/NA	Analysis	7470A		1	310145	09/03/19 18:41	T1H	TAL SEA
Total/NA	Analysis	SM 2340C		1	310101	09/03/19 14:56	ESB	TAL SEA

Client Sample ID: TR-12-W
Date Collected: 08/21/19 14:56
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	3005A			310417	09/06/19 10:36	ART	TAL SEA
Dissolved	Analysis	6020A		1	310658	09/10/19 00:31	FCW	TAL SEA

Eurofins TestAmerica, Seattle

Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: TR-12-W
Date Collected: 08/21/19 14:56
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-25
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			310295	09/05/19 11:27	A1B	TAL SEA
Total Recoverable	Analysis	6020A		1	310554	09/06/19 20:30	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	7470A			310505	09/07/19 11:57	ART	TAL SEA
Dissolved	Analysis	7470A		1	310653	09/09/19 17:00	A1B	TAL SEA
Total/NA	Prep	7470A			310025	09/03/19 08:27	ART	TAL SEA
Total/NA	Analysis	7470A		1	310145	09/03/19 18:26	T1H	TAL SEA
Total/NA	Analysis	SM 2340C		1	310101	09/03/19 14:57	ESB	TAL SEA

Client Sample ID: TR-13-W
Date Collected: 08/21/19 18:34
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-26
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	3005A			310417	09/06/19 10:36	ART	TAL SEA
Dissolved	Analysis	6020A		1	310658	09/10/19 00:35	FCW	TAL SEA
Total Recoverable	Prep	3005A			310295	09/05/19 11:27	A1B	TAL SEA
Total Recoverable	Analysis	6020A		1	310554	09/06/19 20:35	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	7470A			310505	09/07/19 11:57	ART	TAL SEA
Dissolved	Analysis	7470A		1	310653	09/09/19 17:02	A1B	TAL SEA
Total/NA	Prep	7470A			310025	09/03/19 08:27	ART	TAL SEA
Total/NA	Analysis	7470A		1	310145	09/03/19 18:39	T1H	TAL SEA
Total/NA	Analysis	SM 2340C		1	310101	09/03/19 14:57	ESB	TAL SEA

Client Sample ID: TR-14-W
Date Collected: 08/21/19 18:34
Date Received: 08/26/19 12:25

Lab Sample ID: 580-88695-27
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	3005A			310417	09/06/19 10:36	ART	TAL SEA
Dissolved	Analysis	6020A		1	310658	09/10/19 00:40	FCW	TAL SEA
Total Recoverable	Prep	3005A			310295	09/05/19 11:27	A1B	TAL SEA
Total Recoverable	Analysis	6020A		1	310554	09/06/19 20:39	FCW	TAL SEA
Dissolved	Filtration	FILTRATION			310178	09/04/19 10:39	ART	TAL SEA
Dissolved	Prep	7470A			310505	09/07/19 11:57	ART	TAL SEA
Dissolved	Analysis	7470A		1	310653	09/09/19 17:05	A1B	TAL SEA
Total/NA	Prep	7470A			310025	09/03/19 08:27	ART	TAL SEA
Total/NA	Analysis	7470A		1	310145	09/03/19 18:36	T1H	TAL SEA
Total/NA	Analysis	SM 2340C		1	310101	09/03/19 14:57	ESB	TAL SEA

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Lab Chronicle

Client: Alaska Department of Env. Conservation
Project/Site: Tuluksak

Job ID: 580-88695-1

Client Sample ID: Trip Blank

Lab Sample ID: 580-88695-28

Matrix: Water

Date Collected: 08/21/19 00:01

Date Received: 08/26/19 12:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	309932	08/31/19 00:21	TL1	TAL SEA

Laboratory References:

TAL SEA = Eurofins TestAmerica, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TAL SPK = Eurofins TestAmerica, Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

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Accreditation/Certification Summary

Client: Alaska Department of Env. Conservation

Project/Site: Tuluksak

Job ID: 580-88695-1

Laboratory: Eurofins TestAmerica, Seattle

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-024	01-19-22
Alaska (UST)	State Program	17-024	01-19-20
ANAB	Dept. of Defense ELAP	L2236	01-19-22
ANAB	DoD	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
ANAB	ISO/IEC 17025	L2236	01-19-22
California	State	2901	11-05-19
California	State Program	2901	11-05-19
Montana (UST)	State	NA	04-13-21
Montana (UST)	State Program	N/A	04-30-20
Oregon	NELAP	WA100007	11-05-19
Oregon	NELAP	WA100007	11-05-19
US Fish & Wildlife	Federal	LE058448-0	07-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P330-14-00126	02-10-20
USDA	US Federal Programs	P330-17-00039	02-10-20
Washington	State	C553	02-17-20
Washington	State Program	C553	02-17-20

Laboratory: Eurofins TestAmerica, Spokane

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-025	12-07-19
Alaska (UST)	State Program	17-025	12-07-19
Oregon	NELAP	4137	12-07-19
Oregon	NELAP	4137	12-07-19
Washington	State	C569	01-06-20
Washington	State Program	C569	01-06-20

Sample Summary

Client: Alaska Department of Env. Conservation
 Project/Site: Tuluksak

Job ID: 580-88695-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
580-88695-1	TP-04-SO	Solid	08/22/19 11:47	08/26/19 12:25	
580-88695-2	TP-01-SO	Solid	08/22/19 11:27	08/26/19 12:25	
580-88695-3	TP-02-SO	Solid	08/22/19 11:40	08/26/19 12:25	
580-88695-4	TP-03-SO	Solid	08/22/19 11:43	08/26/19 12:25	
580-88695-5	TP-05-SO	Solid	08/22/19 11:54	08/26/19 12:25	
580-88695-6	TP-06-SO	Solid	08/22/19 12:03	08/26/19 12:25	
580-88695-7	TP-07-SO	Solid	08/22/19 12:09	08/26/19 12:25	
580-88695-8	TP-08-SO	Solid	08/22/19 12:05	08/26/19 12:25	
580-88695-9	Trip Blank	Solid	08/22/19 00:01	08/26/19 12:25	
580-88695-10	Trip Blank	Solid	08/20/19 00:01	08/26/19 12:25	
580-88695-11	TS-01-SO	Solid	08/20/19 16:15	08/26/19 12:25	
580-88695-12	TS-02-SO	Solid	08/20/19 15:28	08/26/19 12:25	
580-88695-13	TS-03-SO	Solid	08/20/19 15:38	08/26/19 12:25	
580-88695-14	TS-04-SO	Solid	08/20/19 15:43	08/26/19 12:25	
580-88695-15	TS-05-SO	Solid	08/20/19 15:52	08/26/19 12:25	
580-88695-16	TS-07-SO	Solid	08/20/19 16:01	08/26/19 12:25	
580-88695-17	TD-01-SO	Solid	08/21/19 13:43	08/26/19 12:25	
580-88695-18	TD-07-SO	Solid	08/21/19 13:43	08/26/19 12:25	
580-88695-19	TS-08-W	Water	08/21/19 10:55	08/26/19 12:25	
580-88695-20	TS-09-W	Water	08/21/19 10:52	08/26/19 12:25	
580-88695-21	TS-16-W	Water	08/21/19 10:50	08/26/19 12:25	
580-88695-22	TR-15-W	Water	08/21/19 12:04	08/26/19 12:25	
580-88695-23	TR-10-W	Water	08/21/19 14:08	08/26/19 12:25	
580-88695-24	TR-11-W	Water	08/21/19 14:12	08/26/19 12:25	
580-88695-25	TR-12-W	Water	08/21/19 14:56	08/26/19 12:25	
580-88695-26	TR-13-W	Water	08/21/19 18:34	08/26/19 12:25	
580-88695-27	TR-14-W	Water	08/21/19 18:34	08/26/19 12:25	
580-88695-28	Trip Blank	Water	08/21/19 00:01	08/26/19 12:25	

Eurofins TestAmerica, Seattle

TestAmerica Anchorage

2000 N. International Airport Road
Suite A10

Phone: 907.563.9200 Fax: 907.563.9210

Chain of Custody Record

249662

THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

08695

Project Manager: Anne Marie Palmieri

Regulatory Program:

DW

RCRA

Other:

Site Contact: Elaine Walnes

Date: 8/22/2019

COC No:

Client Contact	Project Manager: <u>Anne Marie Palmieri</u>	Site Contact: <u>Elaine Walnes</u>	Carrier:	<input type="checkbox"/> COCs	
Company Name: <u>ADEC</u>	Tel/Fax: <u>907-746-3147</u>	Lab Contact: <u>Elaine Walnes</u>	Sampler:	<input type="checkbox"/>	
Address: <u>655 Corcoran St.</u>	Analysis Turnaround Time	For Lab Use Only:	Walk-in Client:	<input type="checkbox"/>	
City/State/Zip: <u>Anchorage, AK</u>	<input checked="" type="checkbox"/> CALENDAR DAYS	Lab Sampling:	Lab Sampling:	<input type="checkbox"/>	
Phone: <u>907-269-5550</u>	<input type="checkbox"/> WORKING DAYS	Job / SDG No.:	Job / SDG No.:	<input type="checkbox"/>	
FAX:	<input checked="" type="checkbox"/> TAT if different from Below _____				
Project Name: <u>TULVIAK</u>	2 weeks				
Site:	1 week				
P.O #	2 days				
	1 day				
Sample Identification	Sample Date	Sample Time	Sample Type (G=Comp, G=Grab)	# of Matrix	Sample Specific Notes:
TP-04-SO	8/22/19	11:47	G	50	3
TP-01-SO	8/22/19	12:00	G	50	3
TP-02-SO	8/22/19	11:40	G	50	2
TP-03-SO	8/22/19	11:43	G	50	1
TP-05-SO	8/22/19	11:54	G	50	1
TP-06-SO	8/22/19	12:03	G	50	3
TP-07-SO	8/22/19	12:01	G	50	3
TP-08-SO	8/22/19	12:05	G	50	3
Trip blank	8/24/19	—	—	—	1
Trip blank	8/20/19	—	—	—	1
TS-01-SO	8/20/19	11:15	G	50	3
TS-02-SO	8/20/19	15:28	G	50	3



580-B8695 Chain of Custody

Preservation Used: <input checked="" type="checkbox"/> 1=Ice; <input type="checkbox"/> 2=HCl; <input type="checkbox"/> 3=HNO3; <input type="checkbox"/> 4=H2SO4; <input type="checkbox"/> 5=NaOH; <input type="checkbox"/> 6= Other	Sample Disposal (A fee may be assessed if samples are returned to lab)				
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.					
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return to Client
<input type="checkbox"/> Return to Client	<input type="checkbox"/> Disposal by Lab	<input type="checkbox"/> Archive for _____ Months			
Special Instructions/QC Requirements & Comments:					
<u>Email results to Anne Marie Palmieri@alaska.gov</u>					

Custody Seal Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.: <u>14 DEC</u>	Company: <u>IGAP</u>	Date/Time: <u>8/22/19/11:43</u>	Received by: <u>Peter Gregors</u>	Company: <u>IGAP</u>	Date/Time: <u>8/22/19 14:53</u>
Relinquished by: <u>Erin Gleason</u>		Company: <u>Whitney J. GAF</u>	Date/Time: <u>8/22/19/14:57</u>	Received by: <u>Ryan Roberts</u>	Company: <u>RAVN</u>	Date/Time: <u>8/23/19 14:38</u>
Relinquished by: <u>Peter Gregory Jr.</u>		Company: <u>RAVN</u>	Date/Time: <u>8/26/19 12:25</u>			
Comments: <u>9/30/2019</u>						

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TestAmerica Anchorage

2000 N. International Airport Road
Suite #10

Anchorage, AK 99502 Phone: 907.563.9210
Phone: 907.563.9200 Fax: 907.563.9210

Chain of Custody Record

249626

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (07/13)

Client Contact		Project Manager: <u>Amarone Palmer</u>	Site Contact: <u>Elaine Walker</u>	Date: <u>8/22/19</u>	COC No: <u>2 of 3 COCs</u>
Company Name: <u>ADEC</u>	Tel/Fax: <u>907-746-3184</u>	Regulatory Program: <input type="checkbox"/> DW <input type="checkbox"/> INPDES <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> Other:	Lab Contact: <u>Elaine Walker</u>	Carrier: <u></u>	Sampler: <u></u>
Address: <u>55 Cordova St.</u>	Analysis Turnaround Time: <input checked="" type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS	TAT if different from Below: <u>1 week</u>	<input checked="" type="checkbox"/> For Lab Use Only: <u></u>	Walk-in Client: <u></u>	Lab Sampling: <u></u>
City/State/Zip: <u>Anchorage, AK</u>	Phone: <u>907.264.1100</u>	2 weeks	Job / SDG No.: <u></u>	Sample Specific Notes:	
Fax: <u></u>	Site: <u>Tulikavik</u>	1 week			
Project Name: <u></u>	P O # <u></u>	2 days			
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.
TS - 03 - SO	8/21/19	1538	G	SO	3
TS - 04 - SO	8/20/19	1543	G	SO	3
TS - 05 - SO	8/21/19	1552	G	SO	3
TS - 07 - SO	8/20/19	1601	G	SO	3
TD - 01 - SO	8/21/19	1343	G	SO	1
TD - 07 - SO	8/21/19	1343	G	SO	1
151 of 165					
Preservation Used: 1=Ice, 2=HCl, 3=H ₂ SO ₄ , 4=HNO ₃ , 5=NaOH, 6=Other Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample. <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown					
Comments: Email Results to <u>annemarie.palmieri@alaska.gov</u> Special Instructions/QC Requirements & Comments: Custody Seal Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Custody Seal No.: <u></u> Received by: <u>Peter Gregson</u> Therm ID No.: <u></u> Relinquished by: <u>Elan Gleason</u> Company: <u>ADEC</u> Date/Time: <u>8/21/19 14:45</u> Corrid: <u>16A11</u> Date/Time: <u>8/22/19 16:53</u> Relinquished by: <u>Peter Gregor Jr.</u> Company: <u>Juliet T Gap</u> Date/Time: <u>8/23/19 14:28</u> Received by: <u>Ryan DeRoberts</u> Company: <u>RAUN</u> Date/Time: <u>8/23/19 14:40</u> Relinquished by: <u>Elan Gleason</u> Company: <u>ADEC</u> Date/Time: <u>8/26/19 12:25</u> Received in Laboratory by: <u></u> Company: <u>SIECA</u> Date/Time: <u>8/26/19 12:25</u>					

Preservation Used: 1=Ice, 2=HCl, 3=H₂SO₄, 4=HNO₃, 5=NaOH, 6=Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazard Flammable Skin Irritant Poison B Unknown

Return to Client Disposal by Lab Archive for _____ Months

Email Results to annemarie.palmieri@alaska.gov

Custody Seal Intact:	Yes	No	Custody Seal No.:	Received by:	Cooler Temp. (°C); Obs'd.:	Corrid.:	Therm ID No.:	Date/Time:
Relinquished by:	<u>Elan Gleason</u>		<u></u>	<u>Peter Gregson</u>	<u>16A11</u>	<u></u>	<u></u>	<u>8/22/19 16:53</u>
Relinquished by:	<u>Peter Gregor Jr.</u>		<u></u>	<u>Ryan DeRoberts</u>	<u>RAUN</u>	<u></u>	<u></u>	<u>8/23/19 14:40</u>
Relinquished by:	<u>Elan Gleason</u>		<u></u>	<u></u>	<u></u>	<u></u>	<u></u>	<u>8/26/19 12:25</u>

230/2019

TESTAMERICA ANCHORAGE

2000 W. International Airport Road
Suite A10
Anchorage, AK 99502 Phone: 907.563.9210 Fax: 907.563.9210

Chain of Custody Record

249625

TestAmerica
THE LEADERS IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.
TAI-8210 (0713)

88695

Regulatory Program: DN NPDES RCRA Other:

Client Contact		Project Manager: <u>Anne Palmer</u>	Site Contact: <u>Elaine Walker</u>	Carrier: <u>Carrier:</u>	Date: <u>8/22/19</u>	COC No: <u>3</u> of <u>3</u> COCs
Company Name: <u>ADEC</u>	Project Fax: <u>744-3184</u>	Analysis Turnaround Time	Lab Contact: <u>Elaine Walker</u>			
Address: <u>555 Corona St.</u>	Tel/Fax: <u>907-269-7350</u>	<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS				
City/State/Zip: <u>Anchorage, AK 99503</u>		TAT if different from Below _____				
Fax: <u>907-269-7350</u>		<input checked="" type="checkbox"/> 2 weeks				
Project Name: <u>TUOKSAK</u>		<input type="checkbox"/> 1 week				
Site: <u></u>		<input type="checkbox"/> 2 days				
P.O #:		<input type="checkbox"/> 1 day				

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:
TS-48-W	8/21/19	1055	C	W	2	X X
TS-49-W	1052	G	W	2	X X	
TS-16-W	1050	G	W	1	X X	
TR-15-W	1204	G	W	2	X X X X	
TR-16-W	1408	G	W	2	X X X X	
TR-17-W	1412	G	W	2	X X X X	
TR-12-W	1456	G	W	2	X X X X	
TR-13-W	1834	G	W	2	X X X X	
TR-14-W	1834	G	W	2	X X X X	
Trip blank	8/21/19	-	-	1	X	

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other

Possible Hazard Identification:

Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazard

Flammable

Skin Irritant

Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:

email results to Anne Marie Palmieri @ alaska.gov

| Relinquished by: |
|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <u>Eric Gleason</u> | <u>Peter Gregory Jr.</u> | <u>Peter Gregory Jr.</u> | <u>Peter Gregory Jr.</u> | <u>Peter Gregory Jr.</u> |
| Company: <u>ADEC</u> | Company: <u>Julianne Igap</u> | Company: <u>Julianne Igap</u> | Company: <u>Julianne Igap</u> | Company: <u>Julianne Igap</u> |
| Date/Time: <u>8/22/19 16:03</u> | Date/Time: <u>8/22/19 16:53</u> | Date/Time: <u>8/22/19 16:53</u> | Date/Time: <u>8/22/19 16:53</u> | Date/Time: <u>8/22/19 16:53</u> |

9/30/2019

Eurofins TestAmerica, Seattle

5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record
eurofins

 Environment Testing
TestAmerica

Client Information (Sub Contract Lab)	Sampler: Walker, Elaine M E-mail: elaine.walker@testamericanco.com
Shipping/Receiving Company	TestAmerica Laboratories, Inc.

Address: 11922 East 1st Ave.	Due Date Requested: 8/30/2019	TAT Requested (days):
City: Spokane	PO#:	WO#:
State, Zip: WA, 99206	Project #: 509-924-9200(Tel) 509-924-9290(Fax)	SSOW#:
Phone: Email: Project Name: Tuluksa	Site:	

Accreditations Required (See note):	Job #: 500-88695-1
	Preservation Codes: A - HCl B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:

Carrier Tracking No(s): 500-69339-1	COG No: 500-88695-1
State of Origin: Alaska	Page #: Page 1 of 2

Analysis Requested									
Field Filtered Sample (Yes or No)									
Perform MSMAD (Yes or No)									
AK102_103/3550C DRO and RRO									
8082A/3550C_PCB_1YR PCBs - Standard List									
Moisture									

Total Number of containers	Special Instructions/Note:
1	

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab, S=Solid, O=Extract, A=Air)	Preservation Code:					
TP-04-SO (580-88695-1)	8/22/19	11:47	Solid	X					1
TP-01-SO (580-88695-2)	8/22/19	11:27	Solid	X					1
TP-02-SO (580-88695-3)	8/22/19	11:40	Solid	X					1
TP-03-SO (580-88695-4)	8/22/19	11:43	Solid	X					1
TP-05-SO (580-88695-5)	8/22/19	11:54	Solid	X					1
TP-06-SO (580-88695-6)	8/22/19	12:03	Solid	X	X				1
TP-07-SO (580-88695-7)	8/22/19	12:09	Solid	X	X				1
TP-08-SO (580-88695-8)	8/22/19	12:05	Solid	X	X				1
TS-01-SO (580-88695-11)	8/20/19	16:15	Solid	X					1

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For Months

Special Instructions/QC Requirements:

Method of Shipment:

Deliverable Requested: I, II, III, IV, Other (specify): Primary Deliverable Rank: 2

Employee Relinquished by: Date: Time: Received by: Method of Shipment:

Relinquished by: Date/Time: Company Received by: Date/Time: Company

Relinquished by: Date/Time: Company Received by: Date/Time: Company

Custody Seals Intact: Custody Seal No: Yes □ No □

Eurofins TestAmerica, Seattle

5755 8th Street East
Tacoma, WA 98424
Phone: 253-922-2310 Fax: 253-922-5047

Chain of Custody Record

eurofins
Environment Testing
TestAmerica

Client Information (Sub Contract Lab)		Sampler: Walker, Elaine M E-Mail: elaine.walker@testamericainc.com	Carrier Tracking No(s): State of Origin: Alaska	Lab PM: Walker, Elaine M E-Mail: elaine.walker@testamericainc.com	COC No: 580-886939-2 Page #: Page 2 of 2																																																
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): Address: 11922 East 1st Ave. City: Spokane State / Zip: WA, 99206 Phone: 509-924-9200(Tel) 509-924-9290(Fax) Email: Project Name: Tululksak Site: SSOW#:				Job #: 580-88695-1																																															
Analysis Requested <table border="1"> <tr> <td>Due Date Requested: 8/30/2019</td> <td>TAT Requested (days): 0</td> <td colspan="4">Field Filtered Sample (Yes or No)</td> </tr> <tr> <td colspan="2"></td> <td colspan="4">Perform M3/M3D (Yes or No)</td> </tr> <tr> <td colspan="2"></td> <td colspan="4">AK102_103/3550C DRO and RRO</td> </tr> <tr> <td colspan="2"></td> <td colspan="4">8082A/3550C_PCB_1YR PCBs - Standard List</td> </tr> <tr> <td colspan="2"></td> <td colspan="4">Moisture</td> </tr> <tr> <td colspan="2"></td> <td colspan="4">Total Number of containers</td> </tr> <tr> <td colspan="2"></td> <td colspan="4">Special Instructions>Note:</td> </tr> </table>						Due Date Requested: 8/30/2019	TAT Requested (days): 0	Field Filtered Sample (Yes or No)						Perform M3/M3D (Yes or No)						AK102_103/3550C DRO and RRO						8082A/3550C_PCB_1YR PCBs - Standard List						Moisture						Total Number of containers						Special Instructions>Note:									
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		Total Number of containers																																																			
		Special Instructions>Note:																																																			
Sample Identification - Client ID (Lab ID) <table border="1"> <thead> <tr> <th>Sample Date</th> <th>Sample Time</th> <th>Sample Type (G=Comp, B=Resin, S=solid, O=owesol, G=grab)</th> <th>Matrix (W=water, S=solid, A=air)</th> <th>Preservation Code:</th> <th></th> </tr> </thead> <tbody> <tr> <td>TS-02-SO (580-88695-12)</td> <td>8/20/19</td> <td>15:28 Alaskan</td> <td>Solid</td> <td>X X</td> <td>1</td> </tr> <tr> <td>TS-03-SO (580-88695-13)</td> <td>8/20/19</td> <td>15:38 Alaskan</td> <td>Solid</td> <td>X X</td> <td>1</td> </tr> <tr> <td>TS-04-SO (580-88695-14)</td> <td>8/20/19</td> <td>15:43 Alaskan</td> <td>Solid</td> <td>X X</td> <td>1</td> </tr> <tr> <td>TS-05-SO (580-88695-15)</td> <td>8/20/19</td> <td>15:52 Alaskan</td> <td>Solid</td> <td>X X</td> <td>1</td> </tr> <tr> <td>TS-07-SO (580-88695-16)</td> <td>8/20/19</td> <td>16:01 Alaskan</td> <td>Solid</td> <td>X</td> <td>1</td> </tr> <tr> <td>TD-01-SO (580-88695-17)</td> <td>8/21/19</td> <td>13:43 Alaskan</td> <td>Solid</td> <td>X X</td> <td>1</td> </tr> <tr> <td>TD-07-SO (580-88695-18)</td> <td>8/21/19</td> <td>13:43 Alaskan</td> <td>Solid</td> <td>X X</td> <td>1</td> </tr> </tbody> </table>						Sample Date	Sample Time	Sample Type (G=Comp, B=Resin, S=solid, O=owesol, G=grab)	Matrix (W=water, S=solid, A=air)	Preservation Code:		TS-02-SO (580-88695-12)	8/20/19	15:28 Alaskan	Solid	X X	1	TS-03-SO (580-88695-13)	8/20/19	15:38 Alaskan	Solid	X X	1	TS-04-SO (580-88695-14)	8/20/19	15:43 Alaskan	Solid	X X	1	TS-05-SO (580-88695-15)	8/20/19	15:52 Alaskan	Solid	X X	1	TS-07-SO (580-88695-16)	8/20/19	16:01 Alaskan	Solid	X	1	TD-01-SO (580-88695-17)	8/21/19	13:43 Alaskan	Solid	X X	1	TD-07-SO (580-88695-18)	8/21/19	13:43 Alaskan	Solid	X X	1
Sample Date	Sample Time	Sample Type (G=Comp, B=Resin, S=solid, O=owesol, G=grab)	Matrix (W=water, S=solid, A=air)	Preservation Code:																																																	
TS-02-SO (580-88695-12)	8/20/19	15:28 Alaskan	Solid	X X	1																																																
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TS-05-SO (580-88695-15)	8/20/19	15:52 Alaskan	Solid	X X	1																																																
TS-07-SO (580-88695-16)	8/20/19	16:01 Alaskan	Solid	X	1																																																
TD-01-SO (580-88695-17)	8/21/19	13:43 Alaskan	Solid	X X	1																																																
TD-07-SO (580-88695-18)	8/21/19	13:43 Alaskan	Solid	X X	1																																																
Possible Hazard Identification <input type="checkbox"/> Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Empty Kit Relinquished by:  Relinquished by: Relinquished by: Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No																																																					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months																																																					
Special Instructions/QC Requirements: Primary Deliverable Rank: 2 Method of Shipment: Received by: Date/Time: 8/28/19 13:41 Company: TASEA Received by: Date/Time: 8/28/19 16:07 Company: TASEA Received by: Date/Time: Company: Cooler Temperature(s) °C and Other Remarks: S-C																																																					

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. 1

Login Sample Receipt Checklist

Client: Alaska Department of Env. Conservation

Job Number: 580-88695-1

Login Number: 88695

List Source: Eurofins TestAmerica, Seattle

List Number: 1

Creator: Blankinship, Tom X

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	missing time for -2
Is the Field Sampler's name present on COC?	False	Refer to Job Narrative for details.
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	One container per analysis for waters.
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Alaska Department of Env. Conservation

Job Number: 580-88695-1

Login Number: 88695

List Source: Eurofins TestAmerica, Spokane

List Number: 2

List Creation: 08/29/19 04:13 PM

Creator: O'Toole, Maria C

Question	Answer	Comment	
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.	6
The cooler's custody seal, if present, is intact.	True	497121	7
Sample custody seals, if present, are intact.	N/A		8
The cooler or samples do not appear to have been compromised or tampered with.	True		9
Samples were received on ice.	True		10
Cooler Temperature is acceptable.	True	5.8	11
Cooler Temperature is recorded.	True		12
COC is present.	True		
COC is filled out in ink and legible.	True		
COC is filled out with all pertinent information.	True		
Is the Field Sampler's name present on COC?	N/A	Not present	
There are no discrepancies between the containers received and the COC.	True		
Samples are received within Holding Time (excluding tests with immediate HTs)	True		
Sample containers have legible labels.	True		
Containers are not broken or leaking.	True		
Sample collection date/times are provided.	True		
Appropriate sample containers are used.	True		
Sample bottles are completely filled.	True		
Sample Preservation Verified.	N/A		
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True		
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True		
Multiphasic samples are not present.	True		
Samples do not require splitting or compositing.	True		
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.	

Presley, Kim

From: Gleason, Erin P (DEC) <erin.gleason@alaska.gov>
Sent: Wednesday, August 28, 2019 5:07 PM
To: Palmieri, Anne Marie G (DEC); Griswold, Lisa M (DEC); Presley, Kim
Cc: Walker, M Elaine
Subject: RE: REPLY REQUESTED***Eurofins TestAmerica sample confirmation files from 580-88695-1 Tuluksak

Categories: Red category

-External Email-

Hi Kim,

Thank you for the email. Sorry about the confusion with the COC. Please see my responses to your questions below in purple. If you need additional information, please feel free to contact me. I will be out of the office starting tomorrow through Monday, but am back Tuesday and Wednesday of next week.

Thank you,

Erin Gleason
(907)-269-7556

From: Palmieri, Anne Marie G (DEC)
Sent: Wednesday, August 28, 2019 2:40 PM
To: Gleason, Erin P (DEC) <erin.gleason@alaska.gov>; Griswold, Lisa M (DEC) <lisa.griswold@alaska.gov>
Subject: FW: REPLY REQUESTED***Eurofins TestAmerica sample confirmation files from 580-88695-1 Tuluksak

Hi –

Please respond to Kim with answers to her questions.

Thanks, AM

From: Kim Presley [mailto:kim.presley@testamericainc.com]
Sent: Wednesday, August 28, 2019 2:36 PM
To: Palmieri, Anne Marie G (DEC) <annemarie.palmieri@alaska.gov>; elaine.walker@testamericainc.com
Subject: REPLY REQUESTED***Eurofins TestAmerica sample confirmation files from 580-88695-1 Tuluksak

Please address the following:

1.) The container labels for metals have the incorrect metals method on all containers. The nitric poly has Diss Metals however this is the container for Total Metals/Hardness. The Laboratory will use the correct container for the analysis needed. However, there is not an unpreserved container provided for Diss metals for sample TS-16-W (580-88695-21). The single container provided was a nitric preserved therefore only Total Metals/Hardness can be run on this. This sample was logged for Total metals/Hardness. **[Gleason, Erin]** Yes, that was mix up. Sorry for the confusion. Please use the correct container for the analysis needed. TS-16-W only had a preserved sample. Please analyze this sample for total metals/hardness.

2.) The sample time for TP-01-SO(580-88695-2) was not listed on the COC. The sample time of 1127am was taken from the container label.**[Gleason, Erin]** Thank you. The time of 1127 am is correct. I verified it in our field notes.

4.) only 1 container was provided for the following samples TS-08-W (580-88695-19) and TS-09-W (580-88695-20)
for 8270DSIM PAH analysis. This could cause issue if re-extraction is required.**[Gleason, Erin]** Good to know.
For future reference, what volume (how many 4 Oz jars) of soil is needed 8270D SIM PAH?

3.) Only 1 Voa vial was provided for the following samples TS-08-W (580-88695-19) and TS-09-W (580-88695-20)
for 8260C-BTEX analysis. This could cause issue if re-extraction is required**[Gleason, Erin]** Good to know.
For future reference, what volume of water (how many vials) are needed?

5.) Many of the container labels had sample times that did not match the COC. All samples were logged in using the COC times.**[Gleason, Erin]** Thank you. We will cross reference the with our field notes and make sure the correct ones are noted in our reports.

6.) An additional container was not provided for hardness although this container was provided in the bottle order. This may cause issues with sample volume needed for all analysis.**[Gleason, Erin]** Which bottle was intended for hardness? We did have some extra bottles after the sampling event, but our understanding was they were extras and not intended for use. For future sampling, which bottle should we have used for hardness?

7.) The field sampler was not provided on the COC.**[Gleason, Erin]** Sorry about that. Where in the COC would we have provided this information?

Attached please find the sample confirmation files for job 580-88695-1; Tuluksak

Please feel free to contact me or your PM Elaine Walker if you have any questions.

Thank you.

Kim A Presley
Project Manager Assistant

Eurofins TestAmerica, Seattle
Phone: 253-922-2310

E-mail: kim.presley@testamericainc.com
www.eurofinsus.com | www.testamericainc.com



Reference: [580-301778]
Attachments: 2

Please let us know if we met your expectations by rating the service you received from Eurofins TestAmerica on this project by visiting our website at: [Project Feedback](#)

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1
Presley, Kim

From: Gleason, Erin P (DEC) <erin.gleason@alaska.gov>
Sent: Tuesday, September 03, 2019 2:00 PM
To: Presley, Kim; Griswold, Lisa M (DEC); Palmieri, Anne Marie G (DEC)
Cc: Walker, M Elaine
Subject: RE: REPLY REQUESTED***Eurofins TestAmerica sample confirmation files from 580-88695-1 Tuluksak

-External Email-

Hi Kim,

No time changes needed. The time difference us from multiple sample bottle/jars being collected at the same location. For examples TS-02-SO has two sample times, but only one was on the COC. Thank you Lisa for sorting that out.

Thanks,

Erin Gleason
(907)-269-7556

From: Presley, Kim [mailto:Kim.Presley@testamericainc.com]
Sent: Friday, August 30, 2019 3:07 PM
To: Griswold, Lisa M (DEC) <lisa.griswold@alaska.gov>; Gleason, Erin P (DEC) <erin.gleason@alaska.gov>; Palmieri, Anne Marie G (DEC) <annemarie.palmieri@alaska.gov>
Cc: Walker, M Elaine <M.Elaine.Walker@testamericainc.com>
Subject: RE: REPLY REQUESTED***Eurofins TestAmerica sample confirmation files from 580-88695-1 Tuluksak

Thanks Lisa,
Attached is the original COC to compare the times you gave to what we have. Let me know if there are any that you would like to have us change.

Kim Presley

Phone: 253-922-2310

E-mail: kim.presley@testamericainc.com

From: Griswold, Lisa M (DEC) [mailto:lisa.griswold@alaska.gov]
Sent: Friday, August 30, 2019 4:00 PM
To: Presley, Kim; Gleason, Erin P (DEC); Palmieri, Anne Marie G (DEC)
Cc: Walker, M Elaine
Subject: RE: REPLY REQUESTED***Eurofins TestAmerica sample confirmation files from 580-88695-1 Tuluksak

-External Email-

1
Good afternoon everyone,

2
As Erin is out of the office currently, I will step in briefly and provide some information. As I am aware, the only
3
issue that needs remediating currently is the sampling times for all of the samples. Please see below:

4
8/20/19

5
TS-01-SO

6
Preserved: 1615

7
Non preserved: 1615

8
TS-02-SO

9
Preserved: 1528

10
Non preserved: 1530

11
TS-03-SO

12
Preserved: 1535

1
Non preserved: 1538

2
TS-04-SO

3
Preserved: 1543

4
Non preserved: 1546

5
TS-05-SO

6
Preserved: 1552

7
Non preserved: 1554

8
TS-07-SO

9
Preserved: 1601

10
Non preserved: 1605

11
8/21/19

12
TD-01-SO

1
Time: 1343

2
TD-07-SO

3
Time: 1343

4
TS-08-W

5
Time: 1055

6
TS-09-W

7
Time: 1052

8
TS-16-W

9
Time: 1050

10
TR-15-W

11
Time: 1204

12
TR-10-W

1
Time: 1408

TR-11-W
Time: 1412

1

TR-12-W
Time: 1456

2

TR-13-W
Time: 1834

3

TR-14-W
Time: 1834

4

8/22/19
TS-07-SO
Preserved: 1601
Non preserved: 1605

5

TP-01-SO
Non preserved: 1127

6

TP-02-SO
Non preserved: 1140

7

TP-03-SO
Non preserved: 1142

8

TP-04-SO
Preserved: 1147
Non preserved: 1147

9

TP-05-SO
Non preserved: 1154

10

TP-06-SO
Preserved: 1159
Non preserved: 1203

11

TP-07-SO
Preserved: 1209
Non preserved: 1209

12

TP-08-SO
Preserved: 1201
Non preserved: 1205

Please let me know if there are any more questions.

Sincerely,
Lisa Griswold
Environmental Program Specialist
ADEC/SPAR/CSP
555 Cordova Street

Anchorage, AK 99501
(907) 269-2021

From: Presley, Kim [<mailto:Kim.Presley@testamericainc.com>]

Sent: Thursday, August 29, 2019 7:06 AM

To: Gleason, Erin P (DEC) <erin.gleason@alaska.gov>; Palmieri, Anne Marie G (DEC) <annemarie.palmieri@alaska.gov>; Griswold, Lisa M (DEC) <lisa.griswold@alaska.gov>

Cc: Walker, M Elaine <M.Elaine.Walker@testamericainc.com>

Subject: RE: REPLY REQUESTED***Eurofins TestAmerica sample confirmation files from 580-88695-1 Tuluksak

Hi Erin,

Thank you for the quick response. I have added my answers to the below questions in red.

Kim Presley

Phone: 253-922-2310

E-mail: kim.presley@testamericainc.com

From: Gleason, Erin P (DEC) [<mailto:erin.gleason@alaska.gov>]

Sent: Wednesday, August 28, 2019 5:07 PM

To: Palmieri, Anne Marie G (DEC); Griswold, Lisa M (DEC); Presley, Kim

Cc: Walker, M Elaine

Subject: RE: REPLY REQUESTED***Eurofins TestAmerica sample confirmation files from 580-88695-1 Tuluksak

Hi Kim,

Thank you for the email. Sorry about the confusion with the COC. Please see my responses to your questions below in purple. If you need additional information, please feel free to contact me. I will be out of the office starting tomorrow through Monday, but am back Tuesday and Wednesday of next week.

Thank you,

Erin Gleason
(907)-269-7556

From: Palmieri, Anne Marie G (DEC)

Sent: Wednesday, August 28, 2019 2:40 PM

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Subject: FW: REPLY REQUESTED***Eurofins TestAmerica sample confirmation files from 580-88695-1 Tuluksak

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2.) The sample time for TP-01-SO(580-88695-2) was not listed on the COC. The sample time of 1127am was taken from the container label. **[Gleason, Erin]** Thank you. The time of 1127 am is correct. I verified it in our field notes. **[Presley,Kim]** ☺

4.) only 1 container was provided for the following samples TS-08-W (580-88695-19) and TS-09-W (580-88695-20) for 8270DSIM PAH analysis. This could cause issue if re-extraction is required. **[Gleason, Erin]** Good to know. For future reference, what volume (how many 4 Oz jars) of soil is needed 8270D SIM PAH? **[Presley,Kim]** This was the water samples and since the entire bottle is used in the extraction a second bottle is always provided for a backup. This 2nd bottle was not provided. For soil, this analysis can come out of a shared 4oz or 8oz soil jar with other analysis.

3.) Only 1 Voa vial was provided for the following samples TS-08-W (580-88695-19) and TS-09-W (580-88695-20) for 8260C-BTEX analysis. This could cause issue if re-extraction is required. **[Gleason, Erin]** Good to know. For future reference, what volume of water (how many vials) are needed? **[Presley,Kim]** 3-Voa vials are provided for each volatile/Gro method. So for each method we are running we require 3 vials.

5.) Many of the container labels had sample times that did not match the COC. All samples were logged in using the COC times. **[Gleason, Erin]** Thank you. We will cross reference the with our field notes and make sure the correct ones are noted in our reports. **[Presley,Kim]** Please get any corrected times to us as soon as possible to make sure they are updated and appear on the final report.

6.) An additional container was not provided for hardness although this container was provided in the bottle order. This may cause issues with sample volume needed for all analysis. **[Gleason, Erin]** Which bottle was intended for hardness? We did have some extra bottles after the sampling event, but our understanding was they were extras and not intended for use. For future sampling, which bottle should we have used for hardness? **[Presley,Kim]** The bottle order provided a separate nitric preserved poly for hardness for volume issues as well as storage purposes.

7.) The field sampler was not provided on the COC. **[Gleason, Erin]** Sorry about that. Where in the COC would

we have provided this information? [Presley, Kim] The sampler info appears in the right top corner of the COC.

TAL-8210 (0713)

COC No:
1 of 3 COCs
Sampler:
For Lab Use Only:

Attached please find the sample confirmation files for job 580-88695-1; Tuluksak

Please feel free to contact me or your PM Elaine Walker if you have any questions.

Thank you.

Kim A Presley
Project Manager Assistant

Eurofins TestAmerica, Seattle
Phone: 253-922-2310

E-mail: kim.presley@testamericainc.com
www.eurofinsus.com | www.testamericainc.com



Reference: [580-301778]
Attachments: 2

Please let us know if we met your expectations by rating the service you received from Eurofins TestAmerica on this project by visiting our website at: [Project Feedback](#)